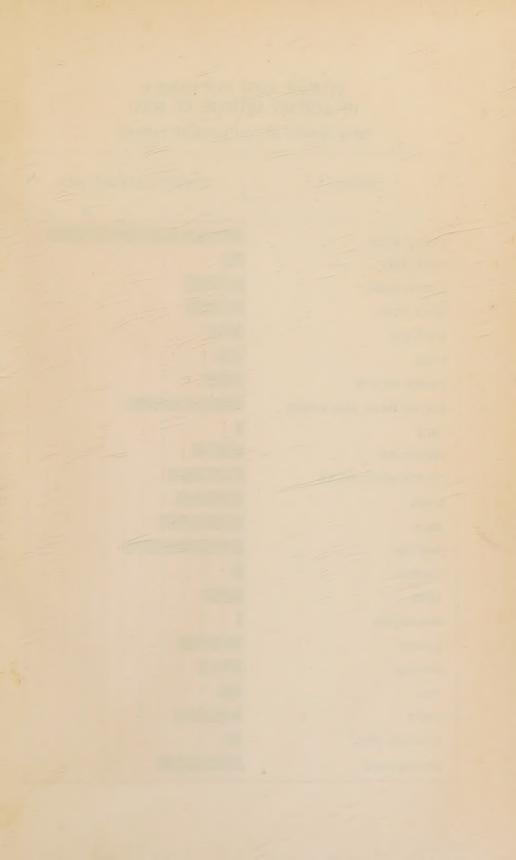




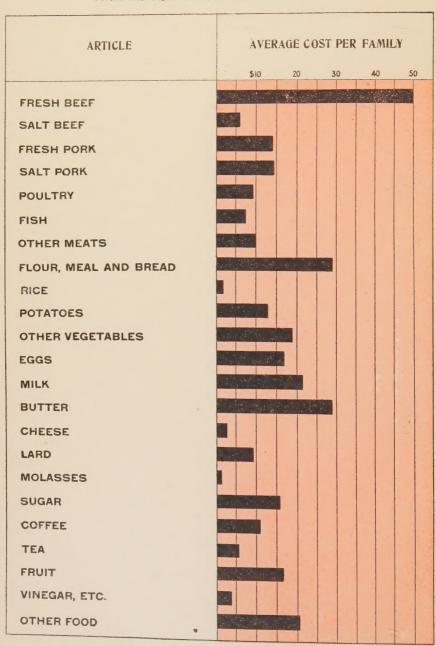
Digitized by the Internet Archive in 2022 with funding from Kahle/Austin Foundation



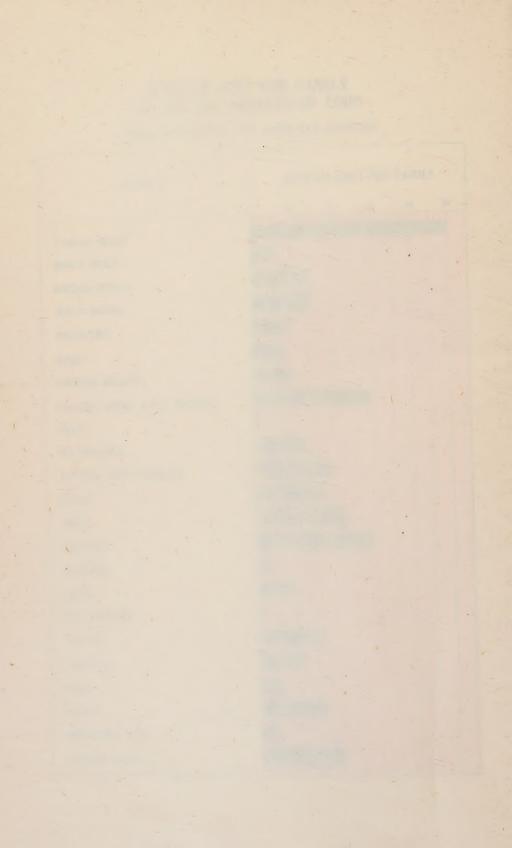


AVERAGE COST PER FAMILY OF CERTAIN ARTICLES OF FOOD

FROM REPORTS OF 2,567 AMERICAN FAMILIES







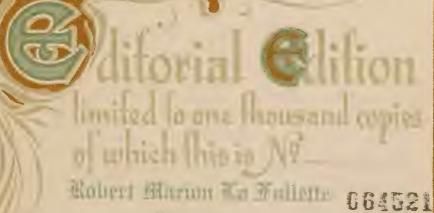








Jhe MAKING OF AMERICA



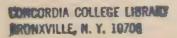
Editor-in-Chief

William M. Handy Charles Higgins Managing Editors

VOL. X

Public Welfare

The Baking of America (Eq.



Copyright 1905 by John D. Morris & Company Copyright 1906 by The Making of America Co.

CONTENTS

VOLUME X.

PUBLIC WELFARE.

Charity,—Theory and Practice.	
BY CHARLES RICHMOND HENDERSON	
The Expansion of Organized Charity. BY ALFRED O. CROZIER	
Benevolent Institutions. BY JOHN KOREN	
Science in Philanthropy. BY CHARLES RICHMOND HENDERSON	
Educational Philanthropy as an Investment. BY ROBERT A. WOODS	
Jewish Charities. BY LEE K. FRANKEL	
Emergency Relief in Great Disasters. BY EDWARD T. DEVINE	
The Building of Hospitals. BY HOLLIS W. FIELD88	
Institutions for the Blind. BY G. L. SMEAD	
Provision for the Insane. BY WILLIAM M. EDWARDS	
Immigration and the Public Health. BY ALLAN McLAUGHLIN	
City Life, Crime and Poverty. BY JOHN R. COMMONS	
Poor Relief in the United States. BY EMIL MUNSTERBERG	

\	The Drink Problem. By Thomas Davidson Crothers	176
	Tenement House Regulation. BY ROBERT W. DE FOREST	193
/	Race Suicide in the United States. BY WALTER F. WILCOX	207
	American Women in Philanthropy. BY MAY WILKINSON MOUNT	218
	DI COLLI CILIARION VIVIVIVIVIVIVIVIVIVIVIVIVIVIVIVIVIVIVI	222
	Building and Loan Associations Make Both Men and Cities. BY HERBERT FRANCIS DE BOWER	226
	Fraternal Insurance in the United States. BY B. H. MEYER	232
	Growth of Secret Societies. BY WILLIAM WALLACE PHELPS	249
	Principles of Reform in Penal Law. BY CHARLTON T. LEWIS	254
	Evolution in Reformative Methods. BY LYMAN D. DRAKE	262
_	The Race Problem at the South. BY HILARY A. HERBERT	270
	The Development of Public Libraries. BY CHARLES AMMI CUTTER.	275
18	The Adulteration of Food and Medicine. BY HAMILTON P. DUFFIELD	2 88
	Corruption in Public Life. BY CHARLES J. BONAPARTE	301
	The Reign of Law. BY JOSEPH WINGATE FOLK	307
	GENERAL INDEX	04.77





CHARITY—THEORY AND PRACTICE.

BY CHARLES RICHMOND HENDERSON.

[Charles Richmond Henderson, associate professor of sociology in the University of Chicago, is one of the world's foremost authorities on scientific philanthropy; he is a graduate of the old University of Chicago and of the University of Leipsic; he has traveled extensively in Europe and America investigating applied philanthropy more especially in regard to prison conditions; he is probably the best known American writer on philanthropic subjects.]

Copyright 1903 by American Academy of Political and Social Science

American farmers have long known the importance of importing the finest breeds of horses and cattle, of crossing strains and exchanging seeds. We are at least beginning to learn the value of cross fertilization in the realm of social practice. The only reliable basis for a law or method of administration, or for a social experiment, is knowledge of the experience of the civilized world. The conditions of modern life forbid provincialism in thinking and isolation of workers. The so called self made man who boasts of being practical is of all men frequently the most visionary schemer, because he lives on an island without communication with the continent and gives his petty vision validity for mankind. His ideas become dwarfs, like the hens described by Hawthorne to ilustrate the danger of in-and-in breeding. Dr. Lester F. Ward uses the happy epithet, "the illusion of the near," to designate the mental myopia which comes from the habit of neglecting large general views of world movements. One who, climbing a mountain, loses himself in the tangles of brush and the gulches of the seamed flank, does not enjoy the beauty of the purple distance nor discover the order of the extended range. The central purpose of this article is to indicate the direction in which the apparently impulsive, emotional and chaotic efforts of philanthropy are tending, the outlines of a system of orderly approach to problems of management, and some of the unsettled problems which confront and halt us at the frontier of present experience.

Under the rule of thumb and the régime of merely practical people the propagation of the feeble minded stock went on unchecked, with its accumulation of miseries. It was when

Vol. 10-1

men began to mix theory with practice, and bring to bear the lessons of biology on the conduct of poor relief, that actual progress was made toward a rational, humane and effective policy of segregation of the unfit. It was a philosophical state secretary, a companion of men of science, who crystallized the working hypothesis of segregation into this statement:

"By reason of years of study, we are coming to know what measures are preventive. These are practical and economical. Had they been known and could they have been adopted a generation ago, we should have a much smaller number of dependents to care for now. If, now that we know them, we utilize these preventive measures, there will be a great de-

crease of dependents in the next generation."

The last century ripened the products of growths which root themselves in the period anterior to the Reformation. Poor relief, in the history of Christian peoples, has assumed three types, in response to changing social conditions: the voluntary and congregational charity of the early churches, before Constantine; the medieval ecclesiastical methods of parishes, bishops, monasteries, orders and institutions; and the modern laic and political poor relief, supported by taxation and supplemented by individual and voluntary charity. The peoples of northern Europe, largely Teutonic and Protestant, have carried the system of public relief much farther than the romance countries of southern Europe; but France and Italy have embarked upon the same voyage, urged by the same forces. In Germany the national feeling which created a central legislature at Berlin, a supreme court at Leipsic, and an imperial army and navy, could not brook the spectacle of a suffering citizen without right to relief, in whatever state or commune he might fall into destitution, or, neglected by chance individual charity, be driven to steal. The imperial poor law and the workingmen's insurance measures are expressions of a civic conscience as well as of a consciousness of common interest. The creative thought does not seem to be merely to secure better administration, but to fulfill a national obligation. So long as there is no legal system, with a basis in universal taxation, multitudes of the destitute must be exposed to all the uncertain chances of liberality or neglect which

characterize voluntary charity. The heroic fight of Thomas Chalmers against the introduction of the outdoor relief system of England into Scotland was lost, and the principle of individualization by small districts, which he demonstrated by action. has never yet taken deep root in Great Britain, although it has triumphed in the German Elberfeld system, and struggles for life and growth in the charity organization society on both sides of the Atlantic. On the other hand, the obligation of the whole community to all its destitute members, which is the fundamental principle of poor laws, seems destined to be accepted by all the states of Christendom. The reaction against it in American cities is probably due to the general despair of securing honest and competent administration under the spoils system of municipal government; for outside the cities the wisdom of a poor law for outdoor relief is practically unquestioned. France, which long persisted in refusal to extend outdoor relief beyond the urgent cases of insanity and helpless infancy, has in recent years greatly enlarged its scope. The law of 1811 was modified in 1893 by placing medical relief under public The next stage of development would seem administration. inevitable, pensions for indigent aged people at cost of tax payers, and definite provision for all who are indigent and helpless.

Italy, united politically into one kingdom, has patiently sought to bring some kind of order out of the chaos of medieval relief methods which filled her cities with beggars, and yet left the most miserable paupers of backward communes to starve. The endowed charities have been gradually brought under systematic control, dead branches have been pruned, hurtful and absurd methods have been corrected, and the foundation has been laid for a rational and modern relief system.

But if the state enlarges its activities on behalf of the destitute, it follows that there must be central regulation of the conditions under which relief may be granted. The state must lay the burden on local political divisions for direct administration and support. This involves, first of all, more stringent settlement laws. The movement of population from state to state and even from continent to continent is now so

easy and cheap, and the inducement for forwarding undesirable citizens is so strong, that one community may find itself overwhelmed with a burden which rightly should be shared. Cities attract paupers, and country relieving officers are prone to furnish free transportation to places where mercy is blind, people too busy to investigate, and where questions are not asked except by inveterate organizationists, that tribe so hard of heart. One form of barrier is the immigration law against importation of European defectives and Chinese laborers with a pauper standard of life. Even Russia has been compelled to resort to settlement laws to prevent congestion of pauperism in centers of population. Germany, since 1870, under a unified imperial code, has reached a fairly satisfactory solution. In the United States, which has felt so rich that it could endure almost any abuse, the evils of unregulated migration of paupers are becoming so manifest as to call for more efficient measures. Massachusetts and New York may be taken as examples of old communities with inherited laws and traditions of ancient English customs, and with a long experience of their own, and these have developed complicated settlement regulations, though of different types. The ideas of the eastern states travel slowly westward, as cities grow and the pressure of pauperism is more sensibly felt. So long as the hardships of the plain and of a pioneer life held feeble folk at a distance, the states of the west were not impelled to fix severe conditions of settlement. But when Atlantic cities shipped the children of immigrants, even of paupers and criminals. into their villages, instead of sending them back to Europe, or caring for them at home, the states, one after another, passed laws requiring at least security for their selection and supervision. So long as there was free public land a large population was desired, and quality was not so much a question. Malaria and revolvers, in certain districts, have represented natural and artificial selection, and settlement laws are gradually added to help nature. While the laws of settlement in Colorado are still quite mild, the invasion of consumptives has led to a discussion which will doubtless result in more adequate protection.

The more complete organization of civil relief does not

imply the suppression of private and ecclesiastical benevolence, but only a better understanding and division of labor, a demarcation of spheres of influence and activity. The German Evangelical Inner mission, for example, the rapid multiplication of English philanthropic enterprises, and the devotion of means and personal service in America, show that a public system has strict limitations; and that the same civic conscience which supports a poor rate also calls for personal and associated efforts too delicate for the rude and cumbrous machinery of the state. The same tendencies are at work in Scandinavia, Holland, Scotland and elsewhere. Many of these agencies are not under ecclesiastical control, as the Red Cross society; but the church has been awakened to take to heart its ancient task of ministry to the poor.

It is true that these two systems have grown up somewhat independent of each other, and sometimes there is conflict or competition between them. Even German municipal councilors may be heard to complain that the church parishes, especially those with large funds, do not cooperate with each other or with the city, in an harmonious plan of helping the poor. In the United States, where the horror of bureaucracy is so strong, we have reconciled ourselves to the tyranny and corruption of bossism and spoils, evils unknown in German administration of poor relief. In many places our efforts to secure information to which every taxpayer has a moral and legal right, are often treated with that insolence which is evidence that investigation is both hated and feared. In many places no statistics of value are kept, and original records are burned at frequent intervals on the plea that unfortunate citizens in need of help should not have their names kept in a public record. In German cities the feelings of dependents are more respected than here, and the administration is practically effective through voluntary and unpaid visitors, carefully selected by the authorities.

The Charity Organization society is therefore called for, not only in Great Britain and America, but even in countries like Germany, where its principles are actually embodied in the public system. Indeed, the organization movement is as wide as civilization. It is an effort to synthetize the sepa-

rately evolved agencies of state, church and private associa-

Another illustration of the tendency to federation of philanthropy, to form trusts of charity, may be taken from a recent organization of child saving societies of the middle west. The belief that the best place for a normal dependent child is not in a large cold storage establishment, but in a warm and real family home, has everywhere taken deep root. the number of homeless children increases with population, and as neighborhood ties are broken up by the incidents of a shifting urban life, the necessity of organized effort to find new homes, select them carefully and supervise them thoroughly, has become generally apparent. Even where the state, as in Michigan, Wisconsin, and Minnesota, has provided a temporary school and placing-out agency, with admirable administration, popular sentiment favors the support of voluntary associations, and in most states this form of help is alone in the field. Independent in origin, associations of the same type have sprung up in the vast plain drained by the Mississippi river. Some of these societies were admirably managed from their experimental beginnings, while others were conducted by persons who had inadequate conceptions of the responsibilities they were assuming. Occasionally downright dishonesty has been discovered. There are still very large areas, especially in the south, in which many little waifs are thrust into poorhouses and even jails, and are without organized means of placing out the helpless and homeless. The necessity for federation, in order to correct abuses, guide action and enlarge the field of labor, became manifest to many persons, and these formed the National Children's Home society on the basis of a former society. The ideals of this organization have by no means been reached, but already the semiannual meetings of executive officers for discussion, criticism, personal acquaintance and propagandism have clarified thought, brought essential regulative principles into light and clear expression, corrected abuses, prevented unwise enterprises, adjusted differences, trained new workers, and extended agencies into destitute fields. A table of statistics published by this society May 31, 1902, showed the results of work done

in twenty four states: Total number of children cared for from beginning, 18,528; children now under supervision, 10,704; number of children placed in families for the first time, during the year reported, 1,900; expenditures, \$193,768; value of lands, buildings and funds, \$151,070. The figures show how large a work can be done with little dead capital.

As persons of various occupations, trades, arts and professions federate and confer together with advantage to themselves and the public, inspire professional spirit, improve methods, so charitable workers and students are forming associations in local, state, national and even international

societies, for kindred purposes.

This consideration brings us to a topic over which discussion grows hot in the United States, the problem of state supervision and control of public and even private philanthrophy and relief. It is easily shown that we have here one phase of a world movement. The agitation, excitement and even the irritation of the debate will conduct us toward a sober and profitable consideration of the experience of civilized nations, especially of those where the science of administration has been more fully developed than with us.

Some illustration from the older countries may serve to light the way to secure ground. In a study by the present writer, the documents relating to central administration of penal and correctional establishments were collected and made accessible to readers of English; and there it will be shown with considerable detail that in establishments of this class the necessity for central control has been everywhere legally recognized, except in the United States. In Germany alone there is no such system of public supervision and reports in addition to outdoor relief, except in Bavaria. This defect seems due to the fact that the municipal relief system has reached a high degree of perfection, is based on a common poor law, and is so independent of voluntary charity that no serious demand is made for state supervision of administration. It is admitted, however, by high authorities, that not only rural relief but even urban administration would often be improved by the requirement of inspection and uniform reports of statistics. Such inspection and even control is carried very far

in Great Britain. The bitter and costly experience under the tax methods previous to 1834, taught the English people a lesson which they have not yet forgotten. The local authorities have, indeed, much responsibility and freedom of initiative, but over England and Wales the local government board exercises control under a general law, and a similar system is organized both in Scotland and Ireland. For the inspection of care of children and families women are frequently

appointed, and with excellent results.

In Austria, state commissions have inspectors of local relief officers and they secure uniform, impartial, and efficient administration of the law. Local officials there, as everywhere, as a rule, lack training, reliability and accuracy, as compared with central officers, but they have the advantage of intimate knowledge of the conditions in their own neighborhoods. combining central supervision with local responsibility for details, the best results are obtained. In Switzerland, canton of Berne, under a recent law, a corps of inspectors keeps the central board of supervision in touch with district relieving officers. In Belguim a commission reports in terms of enthusiasm on the results of state supervision, and calls the members of the staff of inspectors apostles of beneficence. France, true to its traditions of central control, extends its state administration as far as government relief extends. These indications of tendencies of European countries bring to light certain principles which seem to lie at the basis of the discussion in which our people are now engaged.

Those who imagine that the most perfectly disciplined administrators in the world permit themselves to execute law exempt from the influence of competent citizens would do well to study the numerous organizations which help to bring government into touch with daily life. The German imperial and state governments have long since developed various devices for the representation of interests and of expert knowledge, both in the preparation of legislation and the execution of laws, as in relation to colonies, emigration, boards of trade, insurance, public health, welfare of workingmen, postal ser-

vice, agriculture, railroads, and stock raising.

If, under the most scientific systems of administration,

both special commercial and public interests require representation and hearing, how much more true is this of wards of charity, the insane, the imbecile, the homeless child, who are

incompetent to plead for themselves.

The direct and measurable effects of simple supervision and publicity, without legal control, are seen in the statistics of outdoor relief by the township trustees of Indiana. There the local officials are required to send to the state board of charities a report of every family which receives aid. These reports are tabulated, set in contrast and published. The cost to the public has been diminished, the poorhouses have not been crowded, and the more careful scrutiny of individual cases has unquestionably led to an improvement of their moral

habits on which permanent welfare depends.

First of all we need to make clear to ourselves the distinction between state control of direct administration and organization of public opinion as to policies and results. In the controversy much confusion has been introduced into papers and hot speeches by failure to note the difference between these aims of constitutional and popular governments. Dr. F. H. Wines brought out the point at Detroit and it ought to be insisted on to the end. Public control of administration must be in the hands of salaried experts; agencies of public opinion should not be paid, unless for actual expenses, and they need not be professionals. In our judicial experience we recognize the difference between the judge and the ordinary juryman. In municipal administration we have salaried engineers and expert accountants on one side, and representatives of citizens on the other. In most state and national affairs the same distinction is familiar. A democracy is competent to judge of policies and results, if it has means of information; and it will not long tolerate gross evils if they are simply brought to light. But in the work of actual administration a body of professional salaried men is required, men who specialize their work and give themselves wholly to it. In the social enterprises of public relief, indoor and outdoor, the same distinction should be clearly and frankly admitted.

If we consider the reasons for providing a legal means of educating and expressing public sentiment about policies

and results they may be summarized in the form of maxims of experience. Helpless invalids, insane patients, paupers in remote poorhouses, feeble minded persons, can not defend themselves, can not reach the organ of influence, can not plead in courts of equity for themselves. A humane society will provide for a hearing in the forum of publicity. History teaches us that where abuses are possible they will occur; that professional officers are not to be trusted to inspect and report on their own conduct in office and be permitted to exercise irresponsible power. When officials resent interference from outside, the alarm should be sounded from every home. democracy can not dictate a system of medical practice, but it can judge of a policy when its fruits are made known in comparative tables of sickness and mortality. The great public is awkward enough, and sometimes foolish, but it is competent to see the difference between bad and good management of an institution by comparing the use made of severity and violence to secure order, and in the increase or decrease of disease due to filth or neglect. Therefore, granting, as the present writer does, that state boards of control, properly organized, are demanded by the teachings of world experience, it must also be insisted that this concession does not touch the question of supervision. Boards of control are salaried administrators, and if kept in office long enough may become experts. But when infallibility is claimed for them, with audacity of assertion and paucity of proof, we must insist again on the argument that no body of officials has the moral right to pass on its own conduct of affairs. The fact is that we already have boards of control in all the states, perhaps too many of them; and the new movement is simply one to consolidate them, pay them, and secure the advantages of economy and responsibility which are likely to result from the proposed arrangement. It is probable that a board of control for each great group of public institutions, penal, sanitary, educational, charitable, agricultural, etc., may prove to be a wise measure, and experiments are already on trial to test this hypothesis. But the intelligent friends of the poor and helpless must hold together in making the demand that the voluntary service of intelligent and benevolent representatives of the public shall also be legally recognized; and boards of

control should be the first to insist on this principle.

There are, of course, various methods of organizing for free and independent inspection of public administration. Thus in the English prison system a board of visitors has considerable influence. On the continent of Europe the societies of patronage, for aiding prisoners and their families, have long exercised a wholesome influence on penal establishments and legislation, and more than once have broken through the crust of custom which often prevents the growth of ideas in officialdom. In German public charity the voluntary honor office is a large factor, and the bureaucracy, if they have any distrust or envy, seem to be successful in hiding their feelings. In our own country the boards of county visitors in certain states have already accomplished much good, have exposed abuses, have wakened sleepy officers, and have collected facts of immense importance to legislatures. The New York Charities Aid association is a typical example of an independent society, legally recognized, and exercising vast influence. Various prison societies belong to the same type.

The dangers which may be expected, especially in America, from boards of control without legal and capable agencies of supervision, are such as the following: A board which inspects, audits and passes on its own deeds, without check, soon comes to feel that it is infallible and omniscient; or, if it escape this foible, it is more than human. One who is never contradicted may be excused if he rapidly acquires profound confidence in his own judgment. They soon feel the warm glow of satisfaction in the use of unobstructed power. It is a rare absolutist sovereign who begs for a constitution. Strong men like Bismarck chafed at the delays of parliamentary questioners. It is asserted already by men near the heart of secrets that there are gentlemen who rather enjoy seeing superintendents of asylums and hospitals, party leaders, legislators, office seekers, contractors, and even state university presidents cooling their heels in the anteroom of the star chamber of a state board of control. Even if the testimony is questioned this result is inevitable.

Secrecy, the cloud which hides all perils and abuses, is

unavoidable with a board of control without a legal method of supervision independent of it. Reports on forms provided by statute are deceptive; there is no substitute for the inspection of a living person. Partisanship is charged, for the bipartisan board is by no means synonymous with nonpartisan when it comes to redeeming ante-election pledges by the party in power. Such are the fears of most students of the situation, and the fact that the new boards have really rendered important services during the short trial does not quiet anxiety.

It follows from the principle of social interest and solidarity of responsibility that private charities must ultimately be subjected to governmental supervision and control. This suggestion will be resented by those who have been brought up in the frontier conditions of a new country, where distance of social atoms reduced friction and collision. But with the growth of urban life, and the consequent intimacy of contact between persons and societies, more regulation becomes necessary. We are defining new crimes with every legislature, and soon we shall bring immoral and wasteful philanthropy under legal control. Some states have already made progress in that direction, beginning with those associations which receive subsidies. It is true that such control is often a mere pretense, and, at the best, public inspection is not infallible, even with national banks and interstate commerce boards. But this is true of administration generally in American cities and commonwealths, and the remedy lies in improving the service, not in inviting anarchy to remain. The perils of inspection by private organizations is illustrated in a recent assault upon one of the best known representatives of charity organization by an irresponsible money gatherer. whose methods of sponging upon benevolent persons had been exposed and thwarted. In the absence of public supervision of alleged philanthropy private firms of detectives have derived considerable income from reporting to business men in regard to persons and associations who wish to be famous for goodness at the expense of the dear public. Evidently where the owner of an automobile must take out a license before he can use the streets for his pleasure, some protection ought to be given generous people against the legion of well intentioned

sentimentalists and sharp knaves who infest the offices and homes of busy philanthropists with pleas which are plausible but without foundation in reason. It is plain enough to a student of world movements in charity that private agencies may be so conducted as to increase the number of dependents and throw heavier burdens upon taxpayers, as the history of beggars in Italy and France clearly proves, not to speak of innumerable facts in our own cities. Thus it is not uncommon for churches to support a family of dependents until they have remained long enough to acquire a legal settlement and then cast them upon the local government to care for by outdoor and indoor methods, perhaps throughout generations. first to welcome state inspection should be those generous benefactors whose methods are so wise that publicity would give them distinction and whose generosity is so splendid that its record would add luster to state history. But inspection and regulation by the incompetent appointees of the spoils system would not yield desirable results, and the civil service reform is as vital in this connection as in relation to municipal government and state institutions.

It is said to the reproach of workers in charity that they do not go to the root of the evil and that they are satisfied to mend and patch where radical measures are required for general and permanent relief. Socialists and special reformers are particularly impatient with the entire range of philanthropic activity. But at the present hour the demands of democratic sentiment and of the long look of science are heard and heeded in the ranks of those who come nearest to the lowest stratum of human misery. Intelligent visitors among the poor are also dissatisfied with alleviating measures where anything more satisfactory is possible, but under any system the call for relief will always be heard and make its appeal to social sympathy. The independent and self respecting workingmen emblazon on their banners, "Not charity, but justice," and they organize to build the strongest dam possible against the overflowing flood of pauperism. Their struggle for a standard of life is the fight for civilization itself, and is not a mere class contest. Universal suffrage means death to progress, unless the great majority of men have that taste for culture which comes with a taste of culture. If the pauper spirit were not detested by the multitude, we might easily return to a lax administration of poor laws, such as brought England to the verge of bankruptcy before the reforms of 1834. Scientific charity arrives at the same conclusion by another route. If a very large body of the population were trained by necessity to live upon alms, the taint of degeneration would

poison national life. Parasitism breeds moral decay.

Constructive and Preventive Philanthropy is the significant title of a recent book, by Joseph Lee, which gives numerous and interesting illustrations of measures which show the influence of modern science on benevolent enterprises: savings banks, playgrounds, baths, gymnasiums, outings to the country, clubs, industrial training. But the author of this book opens a small window into a future of preventive agencies which at present scarcely rise above the horizon—the insurance of workingmen against economic ruin from accidents, sickness, and the feebleness of old age. He speaks with natural and proper hopefulness of those rare and suggestive experiments made by some of our great corporations, and he adds: "It is said that one seventh of the railroad employes of the country are members of the insurance departments." But why only one seventh? Since it is unquestionably good for them, why not all employes, in all occupations where income is close upon the margin of need, as in Germany? So important has this subject of preventive methods seemed to many active workers among the poor, that the National Conference of Charities and Correction took the following action:

"The executive committee recommends to the National Conference of Charities and Correction, without committing the conference to any particular system, in advance of investigation, to provide for the appointment of a commission of seven persons to consider plans of so called insurance for wage earners in case of accident, sickness, invalidism and old age, with special reference to their effects on dependence and crime, the commission to be continued for at least three years before

making its final report."

The president of the conference appointed on this commission, F. L. Hoffman, S. G. Smith, John Graham Brooks,

Amos W. Butler, Frank A. Fetter, E. T. Devine and Charles R. Henderson. This commission has mapped out an investigation and divided the topics among them, and invites contributions of information.

In Germany the value of such universal and compulsory insurance is as well recognized among charity workers as the value of compulsory school attendance. The prospect of securing adequate protection of this kind by individual savings or by private and voluntary initiative is about as hopeful as that of universal education without required attendance and public schools.

It may not be out of place in this survey to suggest a few of the problems suitable for the studies of young graduates. Thus it seems very desirable to investigate at close range the question as to how far and in what ways various methods of poor relief affect the rate of wages in certain industries. The best results can be reached only by a wide and prolonged investigation by the permanent census bureau of the general government. But private students might make experimental local studies which would help formulate the wider investigation of the government, and train agents for its service. the history of poor relief the influence of grants in aid of wages has been disastrous in the extreme, and there are many kinds of evidence in the records of city and state offices which reveal a similar tendency even in America. But we have not as yet adequate statistical data for a judgment, although the teaching of history compels us to look for precisely the same results which have followed lax administration in similar situations. Unfortunately, history does not repeat itself where forces of the same kind are working on the same materials.

It is especially in connection with what the Webbs call parasitic industries that we may first look for such effects of well known causes. There are certain branches of department stores of a low grade and sweated industries, where we may find the disastrous influence of living partly on wages and partly on public or private relief. Local studies have already made fairly clear the connection between this situation and the increase of pauperism. An investigation on a

large scale is required to eliminate special causes and offer a

demonstration which will convince practical men.

The Consumers' league is urging with a tragic array of concrete illustrations the influence of the employment of children in factories, street occupations and mercantile establishments. At present the benevolent public tolerates this robbery of child life, this suppression of play and education, this obstacle to physical development and school training, for the profit of a few who do not propose to support those whose vitality they have despoiled before maturity was reached. Adults, the natural bread winners, are displaced by their own offspring, and even become accustomed to exploiting them as sources of income. This is getting something for nothing, and is permitted only because the public have not the facts spread before them in the bare ugliness of truth. investigations which impress the mind and conscience of the busy, kind hearted world are local in character. Imported statistics are like charged mineral water left in an open vessel: for the sparkle and zest are volatile. Facts lose their momentum if projected very far across state lines.

This remark applies to the bearing of drink habits upon pauperism. The temperance reformers have dulled the hearing of the people with their sensational din; and yet they have, with all their exaggeration, been unable to find adequate language to express the fact. It is now difficult to secure a hearing on the subject, for we have supped full of horrors. Local studies, conducted by methods as accurate as those of Wines, Koren and others for the Committee of Fifty, would be very impressive and might serve to prick the jaded attention of many communities, especially if, with an accurate display of the casual connection between drink and tax burdens, there could be proposed measures of improvement which are im-

mediately practicable.

To numerous graduates of our universities we may commend another field for local study—families and tribes of the degenerate stocks like the Jukes, Smoky Pilgrims and Tribe of Ishmael. The archives of secluded country almshouses in many parts of the land have the materials for studies which, even if they did not at once advance knowledge in general,

might serve important practical and local interests. The records of institutions for the feeble minded have not begun to yield up all they might under the guidance of trained investigators; and it is only as one deals with particular facts of concrete reality in the philosophic spirit and method that he comes into a world current of law.

Vol. 10-2

THE EXPANSION OF ORGANIZED CHARITY.

BY ALFRED O. CROZIER.

[Alfred O. Crozier, treasurer of the National Conference of Charities and Correction, was for several years one of the guiding spirits in the Charity Organization society of Grand Rapids, Mich.; because of the excellent results accomplished in that city he urges that similar steps should be taken in other cities.] Copyright 1903 by Charities

Whether the extension of systematic and intelligent methods of public and private charitable administration should be by design or left to mere accident is a problem soon to be faced and settled.

The splendid idea expressed in the work of the summer school of philanthropic work in training men and women for charitable and associational effort will fall short of its ambition if it simply results in turning out a lot of new candidates to bid for the positions now held by present occupants.

It is notorious that the salaries usually paid for service of this kind are far below what such talents would command in business life. Will the salaries be increased or even maintained, in the face of competition by a large number of new applicants stirred with a desire to do good, and willing to begin at almost any price to get a foothold and an opportunity to help in the great humanitarian work to which they have decided seriously to devote their lives? Unfortunately human nature is approximately the same, whether found in the employing trustees of philanthropic institutions or in the managers of commercial enterprises. Charity workers are not unionized and probably never will be, and voluntary increases of salary in either philanthropy or business are rare, except when inspired by one motive, viz.: the fear of losing the services of a valuable if not indispensable employe. The law of supply and demand rules in the realm of philanthropy as in business.

The nations of the world are struggling to find or develop new markets for the products of their industries. The measure of their success determines the demand and prices for their products, and the wages of those producing them. China is the most sought after plum, because so great in population that its consumption will be enormous once its masses generally are taught to consume foreign importations. America, in her philanthropic, charitable, correctional, and sociological fields, contains hundreds of Chinas, rivaling the orient in disorganization and ignorance, but unlike the Celestial empire, eagerly welcoming improved knowledge and ways when they accidentally discover the blessings of modern methods in their communities.

The inadequate wages of trained workers will be increased and more opportunity provided for those preparing for social service, only by opening new treaty ports in the hundreds of unorganized or disorganized communities of this country. Let a hundred or more cities get the new light and go hunting for trained and experienced persons to take charge of the active organization of such places, and there would certainly be a sudden awakening among the supporters of established agencies and an appreciation of the real value and worth of the patient, quiet, ill paid indispensable heroes whose love and devotion to humanity induce them to turn their backs upon more lucrative business positions or easy lives and to daily meet poverty, suffering and distress, face to face, as we ourselves could not be induced to do, and work out for us the problems which we all know to be fundamental for the safety of our institutions, the progress of society, and the welfare of our country.

If it is wise that charity be organized, is it not wise to organize charity and not leave charity to organize itself? If it has been established beyond dispute in many places, by years of toilsome experiences, that certain methods are the most successful and humane, should not other communities of our common country be given the benefit of this knowledge? If all cities were organized and in coöperation, using common and approved plans, would it not make the work in each easier and would not general progress be more certain and rapid? This being true, should this expansion be left to mere chance or accident, or be organized and wisely directed on an intelligent plan by those whose experience equips them to interest

the right persons in other places, showing them the advantages

and best methods of organization?

When the writer first broached this subject at the Toronto session of the National Conference of Charities and Correction, he encountered the fear on the part of many that such effort would be unwise. But an agreeable change seems to be taking place in the minds of some earnest leaders, and there is confidence that something definite will soon be undertaken to take the light from under the bushel and hold it up to guide those in other places from the mire of antiquated ways to the rock of intelligent sympathy and business methods in philan-

thropy.

The experience of Grand Rapids, Mich., may serve to illustrate and give point to the above suggestions. There, up to fifteen years ago, alms and charity were, to most good citizens, synonymous. Twenty thousand to forty thousand dollars a year was dispensed in outdoor relief, practically without investigation, on the very poor judgment of human nature possessed by the poor director. Children were allowed to come regularly to the department for supplies. As high as five thousand people received aid at a time in that city. Many of these, it has since been discovered, owned houses and lots, were earning good wages or had bank accounts. Grown up, unmarried children who earned good wages, put their parents to public charity as a measure of economy. Politics played havoc with honesty in poor relief administration. About the only record kept was an inaccurate list of names. Each Thanksgiving day the best citizens, with sincere intentions, advertised widely by pulpit announcements and under glaring headlines in the newspapers, that the day was set apart for the practice of charity, that all people who respected the divine injunction were expected to tote out their old clothes, buy a turkey or other tempting provisions, and send to the vacant store selected as headquarters for the occasion; and that everybody who was poor was to come to the headquarters and get in line to be practiced upon. They would get something good and in the lottery might draw something of real value. It was always very successful, attracted splendid crowds, made a fine demonstration and drew forth prayers and thanks for the manifestation of the presence in the hearts of so many citizens of the holy sentiment of charity and humanity. Indiscriminate giving was the rule, and sentiment the guide.

Now the sad part of all this was that these people were

honest and supposed they were doing real good.

The writer then resided in that city and in common with other business men was ignorant of the actual conditions and their effect upon the real problems of poverty. It never occurred to us, and no one ever told us, that these things were wrong, not to say vicious. We simply attended to business

and put something extra on the plate on poor Sunday.

It happened that a local clothing merchant once heard the general secretary of a New York state charity organization society deliver an address and was attracted thereby. He mentioned it to a prominent local banker and to the writer, and it was decided to invite N. Rosenau, of Buffalo, and Levi L. Barbour, of Detroit, to address an opera house meeting. With characteristic plainness of speech, Mr. Rosenau startled the assembly with a recital of conditions prevailing in the local public poor department, which his training had impelled him to investigate as soon as he had reached the city; and he pointed out the direct and indirect effect of such conditions on the future of the city and its inhabitants. The effect will be understood when it is known that in three days annual pledges aggregating \$6,500 were secured with which to start a charity organization society. A revolution in practice and public sentiment of course followed.

All this was a mere accident. It should have been done years earlier. There were those who could have done it. The city grasped the undertaking eagerly when the opportunity offered. Are not those who know what is needed in other places, and know best how to bestow it, conscious of a feeling

of personal responsibility to cooperate to such an end?

There are hundreds of American cities now in approximately the same condition in which Grand Rapids slumbered fifteen years ago. Why not wake up?

BENEVOLENT INSTITUTIONS.

BY JOHN KOREN.

[John Koren, statistician; born Decorah, Ia., March 3, 1861; graduate Luther college and Concordia seminary; special expert for the United States department of labor; investigated the Gothenburg system of liquor selling; expert for committee of 50 to investigate the liquor problem, 1894–9, and since then has been in state and national service. Author: Economic Aspect of the Liquor Problem, and other books, and of many articles in American and foreign reviews.]

Of the 4,207 benevolent institutions in the United States 485 are designated as public. The state of Ohio possesses the largest number of public institutions, followed by New York, Indiana, and Pennsylvania, in the order named. The preponderance of such establishments in Ohio and Indiana is due to the system of county homes for indigent children. The scarcity of institutions maintained at public cost in many communities points, among other things, to the fact that the care of the sick is largely a private enterprise, the communities contributing their share through subsidies to private institutions.

Under private control are 2,359, or 56.1 per cent of the total, while 1,363, or 32.4 per cent, are managed, if not exclusively supported, by religious denominations, orders, or groups of churches. A more detailed inquiry would probably reveal a larger percentage of institutions owing their inception and maintenance to church bodies. The activity of the churches in charitable work of the kind under consideration is particularly notable in some of the newer communities. Thus in Idaho, Oklahoma, Oregon, and Washington about one half of all the benevolent institutions are denominational in the sense that they have been organized and are maintained by the churches. In the southern states, on the other hand, with the exception of Louisiana, the proportion of institutions under church management is comparatively insignificant.

The total population of benevolent institutions on January 1, 1904, was 283,809. During the ensuing twelve months 2,040,372 persons were admitted, and on the last day of 1904 there remained 284,362 inmates. Owing to the impossibility

of securing accurate reports of population from some institutions the enumeration is not quite complete. The establishments for which figures are lacking are, however, among the least important as to size. Could their population have been ascertained, the three totals given above would have been somewhat larger, particularly the number of admissions and the number of inmates remaining at the end of 1904. But the statistics given are sufficient to illustrate the size and movement of the institutional population. It should be observed that they are exclusive of the 156 dispensaries and the 166 nurseries. Neither class of institutions can be said to have inmates in the ordinary sense of the term; moreover, in many instances, no count is made of the individuals frequenting them.

The number of admissions during the year is extraordinarily large and appears altogether out of proportion to the year's increase in the number of inmates. In other words, there were more than seven times as many persons admitted to benevolent institutions in the course of the twelve months as there were in them on the first and last days of the year. The gain in population of the institutions for the year 1904 is represented as 553, but this is probably considerably lower than a perfect enumeration would have disclosed, as more institutions failed to report the number of inmates than to state population at the beginning of the year and the number of admissions.

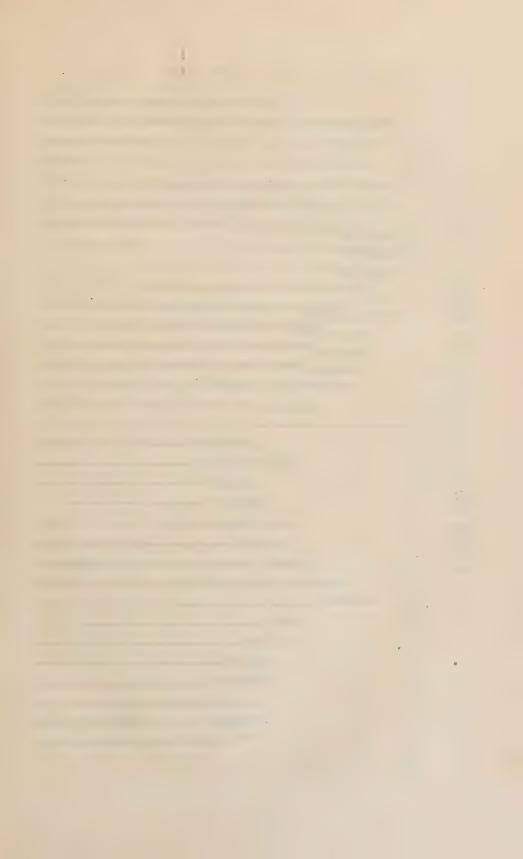
The movement of institutional population is greatest in the hospitals. In 1904 this class of institutions reported more than one half of the total admissions (1,064,512). Second in importance are the temporary homes, to which there were 868,657 admissions, or about three times the number of inmates on the specified dates. Although the orphanages and permanent homes report, respectively, 70,825 and 29,353 admissions, their daily population is known to be largely in excess of these numbers. The institutions for the deaf and blind likewise display a comparative stability in population, the number of admissions in the course of the year being about one half of the number of inmates on either of the census dates.

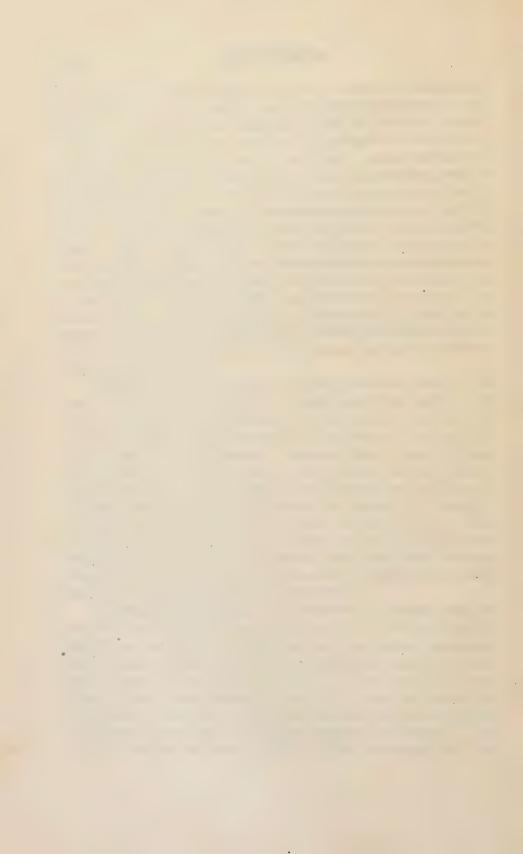
For the whole of the United States the number of inmates of benevolent institutions in each 100,000 of population on

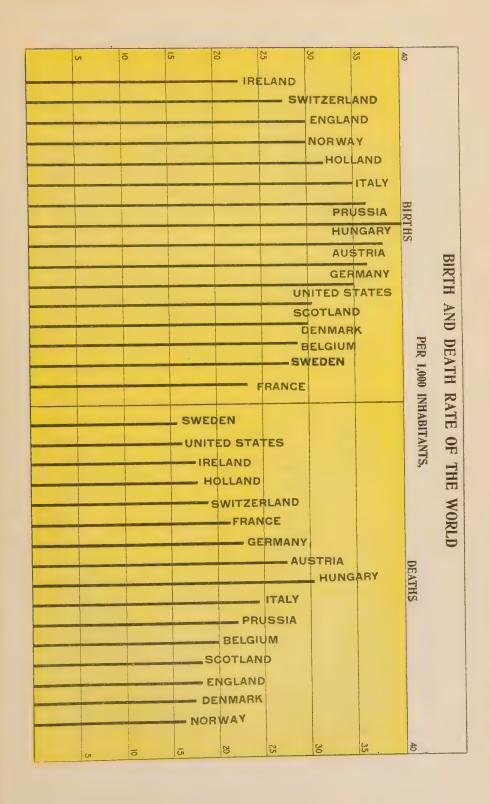
December 31, 1904, was 347, and the number of persons admitted during the year in each 100,000 of population was 2,509.6. So far as the individual state or territory is concerned these proportions are clearly determined not so much by the number of institutions as by their kind. States with a preponderance of institutions having a stable population, such as orphanages and homes for the aged and incurable, naturally show a higher proportion of inmates to population on a given date than a state whose institutions are mostly in the hospital class. On the other hand, the ratio of admissions to population is largely influenced by the extent of hospital conveniences, and where these are especially abundant the state will rank accordingly. Oregon furnishes an illustration in point. In ratio of inmates of institutions on December 31, 1904, to the general population, it stands twenty fifth in the order of states, but in ratio of admissions to the general population during 1904 it stands third.

California is first among the states and territories in the ratio of institution inmates to general population on the date specified, having proportionately twice as many as all but the first nine states. And among the first twenty five are the other young states, Colorado, Kansas, New Mexico, Washington, Montana, and Oregon. Again, among the first twenty five in number of admissions to institutions per 100,000 inhabitants are Oregon, which stands as number 3, Colorado, Washington, Montana, Arizona, Utah, and New Mexico. The fact deserves mention, however, that in some of the newest communities, for instance, Arizona, Utah, and New Mexico, many of the hospitals are maintained by mining corporations and are not intended for the general public.

Although the number of admissions to institutions per 100,000 inhabitants is largely governed by existing hospital provisions, the extent of the latter does not always appear to stand in direct relation to the percentages of the urban population found in the different states. If that were the case, Rhode Island would stand at the top of the list instead of fourteenth, New Jersey would move down a few places, Oregon be relegated from the third to the twentieth place, etc. Yet in many instances there is a fairly close correspondence be-









tween the relative strength of the urban population and the ratio of admissions to benevolent institutions. Massachusetts, New Jersey, New York, Maryland, Connecticut, and several

other states furnish illustrations in point.

How pre-eminently the care of persons in benevolent institutions, as measured either by the number of inmates on the given dates or by the number of persons admitted during the given period, is a matter of private charity in the United States is a most striking fact. About 70 per cent of the institutional population found on a particular date and about 80 per cent of all admitted in a year are beneficiaries of private charity (including, of course, that dispensed by the churches) as distinguished from maintenance solely at public cost. It is clear that the establishment and support of orphanages, hospitals, and temporary homes is left largely to private initiative. Permanent homes, measured by the number of inmates, are more generally made a matter of public concern, while most of the deaf and blind provided for in institutions are cared for by the public authorities.

Of the three general classes of institutions considered, the percentages of inmates both at the beginning and end of 1904 are largest for those under ecclesiastical supervision. This is chiefly attributable to the large number of orphanages maintained by churches. In point of admissions private institutions lead, because of the many hospitals under this form of

control.

Judged by number of inmates and admissions, the orphanages and children's homes under public management are of relatively little importance. This form of institutional charity is largely left to private initiative, since public institutions claim but 10 per cent of the number of inmates and 10 per cent of the admissions. Although particularly a concern of the churches, the orphanages under denominational management, while containing more inmates on January 1 and December 31, of 1904, than both the public and the private institutions combined, show a smaller percentage of admissions than the private class alone. This circumstance suggests that private orphanages are used more liberally as receiving homes from which children are distributed among

families. It is interesting, also, to note that in point of permanent population the orphanages show a larger percentage than any other group of institutions, having about 32 per cent, closely followed by the permanent homes, with more than 27 per cent, and the hospitals, with about 25 per cent. On the other hand, so far as admissions are concerned, the percentage orphanages contribute to the total for all institutions—3.5 per cent—seems surprisingly low.

Undoubtedly the hospital care of the sick is becoming more and more a public undertaking. But at the present time about two thirds of the patients receive treatment in hospitals managed by private corporations and denominational bodies, the former slightly leading in number of patients on the census dates and markedly in number of admissions. More than one half of the admissions to institutions are to hospitals.

The permanent homes form a singular exception, inasmuch as those designated public show percentages of inmates and admissions more than twice as large as those under private and ecclesiastical control combined. When not provided for in almshouses, the aged, incurable, and other needy persons who make up the bulk of the population of the permanent homes are generally supposed to be cared for by private institutions or organizations. The stability of the population in the permanent homes is indicated by the percentage of admissions, which is but 1.4 of the total number of admissions to all institutions, while a little more than 27 per cent of all inmates are to be found in them at a given time.

The difference between the percentage of inmates in public temporary homes and the percentage of those in private and ecclesiastical institutions of this class, and the disproportionate number of admissions to the public institutions, are explained by the fact that most of the latter are municipal lodging houses that are practically without inmates who remain longer than a night. The varying activities of institutions grouped as temporary homes also account for the circumstance that the population of the homes under ecclesiastical control appears to be more stable than that of the same class

of homes under private management.

Institutional provisions for the deaf and blind, being

chiefly of an educational nature, are naturally for the greater part of public origin. The public institutions for the deaf and blind contain more than 70 per cent of the inmates of all such institutions, and show more than 86 per cent of all admissions. The number of deaf and blind under the care of ecclesiastical institutions is almost a negligible quantity. It is true, however, that the deaf and blind under institutional care are far less in number than any of the other classes.

Statements were sought from each institution covering: (1) the amount of annual subsidies from public funds: (2) the amount of income from pay inmates during 1903; and (3) the cost of maintenance during 1903, exclusive of improvements. Entirely satisfactory responses could not always be secured. A total of 43 institutions did not report the amount of annual subsidy from public funds, 225 omitted to give income, if any, from pay inmates, and 241 failed to supply cost of maintenance. Aside from a not uncommon reluctance on the part of institutions to give even the general facts concerning income and cost, it appears that some institutions actually keep no adequate records, while others depend chiefly upon donations of all kinds, the value of which is not easily translatable into dollars and cents. It must not be understood, however, that the absence of statements greatly influences the totals. As a matter of fact, most of the institutions from which financial statements are lacking are among the smallest of their kind. For general purposes the statistics of the extent to which institutions are subsidized out of public treasuries may be considered complete. The cost of maintenance as given is probably an understatement of from \$200,000 to \$500,000.

For the whole of the United States the gross cost of maintaining benevolent institutions in 1903, exclusive of improvements, was \$55,577,633, or, excepting the cost of institutions for the deaf and blind, \$52,053,950. Deducting the income from pay inmates, the cost of maintenance was \$40,729,125, and, exclusive of institutions for the deaf and blind, \$37,306,-135.

The above gross cost of maintaining all benevolent insti-

tutions entailed a per capita expenditure of \$0.70 for the United States.

A presentation, by states, of the cost of maintenance for each inmate of institutions on the census dates or for each person admitted (a combination of the two being out of the question) would tend to misleading comparisons. It is suggestive, however, to note that the annual expenditure per inmate on the basis of the number remaining in institutions on December 31, 1904, appears to run from \$489.50 in Arizona to \$100.20 in Mississippi, where it is lowest. Corresponding figures for some other states make the rate for New Mexico, \$418.46; Montana, \$384.34; Massachusetts, \$307.31; Wyoming, \$280.88; North Dakota, \$265.44; Nevada, \$257.14; Connecticut, \$250.44; Pennsylvania, \$240; and New York, which occupies thirteenth place in point of cost, \$228.55. It is perfectly natural that a high rate of cost should be chiefly characteristic of the newer Western states.

Of the aggregate cost of maintenance 29.3 per cent was expended for public institutions, 43.5 per cent for private institutions, and 27.2 per cent for ecclesiastical institutions. These per cents remain nearly the same when the institutions for the deaf and blind are excluded.

Delaware is the only state that does not support a public institution of any character besides the almshouses and hospitals for the insane. The fact that the amount of public moneys voted for institutional purposes in some states exceeds the total expenditures for private and ecclesiastical institutions may indicate a paucity of conveniences of this character, as in the case of Arkansas, Mississippi, Oklahoma, and Tennessee, or that the state undertakes special functions which elsewhere are left to private enterprise, as in the case of Indiana, Ohio, Kansas, and Wisconsin. In 17 states, including some in which benevolent institutional work has attained its largest development, the expenditures for the maintenance of private institutions are larger than those for public institutions.

On the other hand, the aggregate cost of ecclesiastical institutions is larger than that of institutions under private management in the following 20 states and territories: Ala-

bama, Idaho, Illinois, Indiana, Iowa, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee,

Utah, Washington, and Wisconsin.

In all of the states and territories, except Idaho, Nevada, and Oklahoma, part of the cost of private and ecclesiastical institutions is defrayed from public funds. Frequently contributions are made by the local community, or subsidies are voted by the legislatures. Both methods of subsidies involve a recognition of the fundamental duty of the community to provide institutional care for its sick and dependent members, but also indicate, in a more or less pronounced manner, a preference for a vicarious performance of this duty.

In proportion to the aggregate cost of maintenance the ecclesiastical institutions receive a larger share of public bounty than the private; and in 10 states, namely, Alabama, California, Colorado, Illinois, Iowa, New Mexico, New York, South Carolina, Texas, and Wisconsin, the former get the

larger part of the actual amount of subsidies.

The differing policies in the states with reference to annual payments out of public funds to private and to ecclesiastical institutions do not conform generally to the extent of institutional operations, in the sense that dependence upon this form of income is greatest where the pressure upon these charities appears to be greatest. There are some notable exceptions, for instance, New York, Maryland, Connecticut, Indiana, and Pennsylvania. In each of these states the percentage of total cost of maintenance derived from public funds is from 19.2 upward. On the other hand, states like Massachusetts, Illinois, Iowa, Ohio, Michigan, Colorado, Minnesota, etc., each of which has an extensively developed system of institutions, get only from 1.1 to 5.0 per cent of the cost of maintenance from public treasuries.

For the whole of the United States 26.7 per cent of the aggregate cost of maintenance in 1903 was covered by income from pay cases. Of the total amount received from this source (\$14,848,508) 3.5 per cent was reported from public institutions, 51.7 per cent from private, and 44.8 per cent from ecclesiastical institutions. In proportion to the cost of main-

tenance the income from inmates was considerably larger in ecclesiastical institutions than in private, a fact which must be attributed to the numerous hospitals under church patronage that are largely maintained by the revenue from patients.

There is only one state without a public benevolent institution, but in 15 states there is no income whatsoever from inmates of public institutions. The explanation is that these states provide institutions at public cost only for the deaf and blind, to whom support and education as a rule are given gratis. In fact, less than one fifth of the income from pay cases received at public institutions is secured by all the public institutions for the deaf and blind.

The fact that the income from pay inmates of the public institutions of Massachusetts is much more than twice as large as that of any other state, and forms 30.1 per cent of the total for the United States, must be ascribed chiefly to the public hospitals in this commonwealth and the legal provisions made for the recovery of the cost of maintenance of indigent patients from the city or town in which they have a domicile.

As regards both private and ecclesiastical institutions, the hospitals report most of the income from pay cases. Among the states in which denominational institutions obtain a larger share of income from pay cases than those designated as private, the following are conspicuous: Alabama, Arizona, Arkansas, Illinois, Montana, New Jersey, South Carolina, Tennessee, Washington, and Wisconsin.

The hospital class leads as to aggregate cost, a little more than one half of the entire sum expended for the maintenance of benevolent institutions being for the benefit of the sick in hospitals. Of the total amount of annual subsidies, hospitals receive 37.4 per cent, and 82 per cent of the entire income of institutions from pay inmates falls to the share of this class. In proportion to their activities, private hospitals receive a much heavier donation from public treasuries than hospitals under denominational management. On the other hand, in proportion to the aggregate cost of maintenance the ecclesiastical hospitals receive a greater income from pay patients than the private hospitals.

Of the total cost of maintenance, 18.1 per cent was expended for the support of orphanages. Of the millions of dollars annually expended for the cost and education of orphans and otherwise dependent children, 44.7 per cent goes to the maintenance of those in institutions under ecclesiastical control which, it should be observed, also obtain proportionately a much larger share of the annual subsidies, and also a relatively larger income from inmates who pay something for their support.

The third place in percentage of aggregate cost of maintenance is occupied by the permanent homes, which are supported at an annual cost of nearly ten million dollars, or only a very little less than the cost of all orphanages and children's homes. In proportion to the number of inmates cared for, the permanent homes are the most expensive of all institutions, a fact which is probably due partly to the character of the inmates and more especially to the circumstance that such a large group of these institutions is maintained at public cost. Only 3.1 per cent of the total annual subsidies is given to the permanent homes, and more than two thirds of the amount was secured by private homes. The latter also show a larger percentage of income from pay inmates than the public and ecclesiastical.

Considering the number of persons cared for in the course of a year, the cost of supporting temporary homes is small, being but 5.5 per cent of the aggregate for all institutions. As is well known, in many temporary homes the inmates receive board and lodging in return for doing various kinds of work, not a little of which results in income, but not of the kind that can easily be put into terms of money, and for this reason the income from pay inmates appears smaller than it actually is. The temporary homes receive in cash from inmates 3.5 per cent of the aggregate for all institutions. The proportionately very large percentage given to ecclesiastical institutions of the annual subsidies received by temporary homes is perhaps to be explained by the fact that the ecclesiastical homes care for groups of unfortunates for whom not only the most effective appeal can be made, but who are in need of special in-

fluences that can not so easily be supplied by public institu-

A little more than three and one half million dollars is annually devoted to the care of the deaf and blind in institutions, or 6.3 per cent of the total expended for all institutions. Except as they are found in almshouses and other special institutions, the deaf and blind are in many states exclusively, and in most states for the greater part, cared for at public cost. Ecclesiastical charity enters this field only to a very limited extent, and private institutions for the deaf and blind, although comparatively extensive in operations, are in numerous instances maintained only in the absence of provisions of a public character. For this reason, presumably, the private institutions for the deaf and blind succeed in obtaining more than one half of their cost of maintenance from public grants.

Although the cost of maintaining day nurseries is insignificant when compared with the other classes of institutions, the total expended for them in the year aggregates \$327,659. This class of establishments is also made a beneficiary through public subsidies, but probably without exception these subsidies are contributions from the communities in which the

nurseries are located.

About one fourth of all the benevolent institutions in the United States are devoted to the care of orphans or other dependent children. Private and ecclesiastical bodies each control 478 establishments, and but 119 of the total are directly under public management. In making comparisons it should be remembered that the details in regard to orphanages in the different states are more or less influenced by the prevailing policy regarding the care of children. If the institutional policy is general, the number of institutions and inmates, cost of maintenance, etc., will be proportionately greater than in a state following a noninstitutional policy. In order to supply a perfect statistical picture of the care of dependent children. it would be necessary to account for all those placed in families without passing through institutions; but to do so is not within the province of this article. The state of Iowa may be taken as an example. It has but 12 orphanages, while New Jersey, with a smaller population, supports nearly four times as many. Obviously it would be a mistake to conclude that the apparent lack of institutional provisions in Iowa indicates that the dependent children in this state are relatively so few, or that they are inadequately cared for. The explanation lies in the difference of method.

In many instances the actual number of children's institutions in a state is closely related to the number of its inhabitants; but there are significant exceptions, which suggest in some cases lack of adequate provision for dependent children, and in others that they are largely cared for outside of institutions.

Indiana and Ohio are the only states having systems of county homes for children. As a result they are credited with nearly three fourths of the children's homes maintained at public cost. Twenty six states are without any public homes for children. In the following 22 states and territories the children's institutions under church management exceed in number those controlled by private secular corporations: Alabama, Delaware, District of Columbia, Florida, Illinois, Iowa, Kentucky, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, Oklahoma, Oregon, South Carolina, Virginia, and Wisconsin. Arizona, Idaho, and Wyoming are as yet without any orphanages.

The amount contributed from public sources to children's institutions in 1903 was \$2,181,784, or 21.7 per cent of the total cost of maintenance. In Delaware, Mississippi, Nebraska, Oklahoma, South Dakota, and Utah no help of this kind was given.

A little more than one tenth of the entire cost of maintaining orphanages and children's homes is covered by income from pay inmates who contribute annually about one million dollars. It is not known what part of this income is contributed by relatives or friends of the children, and what part from public authorities who pay stipulated sums per week or month for the support of those who have become direct charges upon the community. In proportion to expenditures the amounts collected from inmates are smallest in the southern and some of the newer western states.

Vol. 10-3

ST. JOHN'S COLLEGE WINFIELD, KAINSAS Day nurseries as yet are located chiefly in a few eastern states with large urban population, and are not found in 26 states. Of the 166 day nurseries in the United States in 1904 no less than 113 are maintained in four states—Massachusetts, New Jersey, New York, and Pennsylvania. Thirty of the entire number are under church auspices and 136 are maintained by private organizations or individuals.

The total number reported as inmates on January 1, 1904, was 7,441, of which approximately one half were in institutions in the state of New York. On December 31 of the same year there was an increase in attendance of 176, which is an understatement, for a large number of institutions failed to report

this detail.

Of the total cost of maintenance in 1903 (\$327,659) considerably more than one half was disbursed for the support of the day nurseries in Massachusetts, New Jersey, New York, and Pennsylvania. Of these states New Jersey is the only one in which day nurseries received assistance from the state, the other notable beneficiaries being in Maryland and Tennessee. The total state grants amounted to \$7,675. Generally subsidies under this head must be understood as coming from the

local community.

Specific conclusions drawn from the number of hospitals in different states in proportion to population would be meaningless so long as it is impracticable to bring single institutions and their operations into comparison. Clearly, one hospital in a community may perform with even better success the work divided among three or more small institutions elsewhere. Yet the extent of the provisions made for the sick, as manifested by the number of hospitals, points not merely to the stress of life under urban conditions and the like, but to progress in humanitarian work. The figures compel the inference that hospital facilities in many instances are not apportioned among states in accordance with needs, but reflect the extent of charitable enterprise.

Attention has been drawn already to the fact that some communities prefer to subsidize hospitals operated as private enterprises rather than to establish institutions of their own. This accounts for the proportionately small number of hospi-

tals designated as public. Delaware, Idaho, Indian Territory, Kansas, Nevada, Oklahoma, Oregon, and Vermont are without them, and in other states they are represented chiefly by federal institutions. The private hospitals outnumber the public by nearly four to one, and the ecclesiastical the public by two to one. Although the hospitals under private management are about twice as numerous for the whole country as those under church control, the latter are in the majority in the following states: Indiana, Iowa, Minnesota, Montana, Washington, and Wisconsin. In all the eastern states the conditions are reversed, but this must not be understood to signify less activity on the part of the churches; the charity simply does not take denominational form to as great an extent.

There are in the United States about 87 patients in hospitals to each 100,000 of population, while in the same number of inhabitants more than 1,300 were persons admitted to hospitals during twelve months. These figures would, of course, receive substantial additions, were all patients accounted for who frequent hospitals not supported through benevolence in some form. Yet the ratios per population would probably not be materially increased, for the hospitals not enumerated are almost exclusively given over to the care of the compara-

tively few rich or well to do.

Not only are many hospitals very limited in facilities, but also the number of hospitals in a state gives little indication of the extent of institutional operations. For example, Iowa has four times as many hospitals as Louisiana, or 41 against the latter's 10, yet, both as to number of admissions in a year and the number of patients to be found at any given time, the hospital work of Louisiana is on a larger scale.

22.6 per cent of the gross cost of maintenance was expended for the hospitals classed as public institutions. The cost of the private and ecclesiastical reached a total of \$21,594,-784. Deducting for both these classes the amounts of income from pay patients and the annual grants from public funds, the sum which was raised through some other form of benevolence than appropriations from taxes was \$7,580,504. Many hospitals receive substantial aid through donations in kind,

which diminish the need of cash outlay. The value of these

gifts can not be estimated.

New York, Pennsylvania, Massachusetts, Illinois, California and Ohio contain about 35 per cent of the total population of the country, yet contribute about two thirds of the cost of maintaining hospitals, or over eighteen million dollars, while the next 21 states, which contain almost exactly the same percentage of inhabitants as the first 6, spend for this purpose less than six millions, or a little more than a fifth of the entire cost for the United States. The 5 states, Missouri, New Jersey Maryland, Minnesota, and Michigan, although containing but 13.6 per cent of the population, expend \$3,698,224 for the support of hospitals, while the last 17 states beginning with North Carolina and ending with Oklahoma have 15.5 per cent of the total population and gave but \$898,419 for the support of hospitals.

These financial comparisons indicate the conditions necessitating extensive hospital facilities rather than the advance in benevolent enterprises, though the latter is more generally a concomitant of settled and prosperous community

life.

The subsidies received by hospitals from public funds were \$2,276,336, which equals 18.1 per cent of the cost of maintenance in 1903. The hospitals in the following states and territories were not aided by payments from taxes: California, Idaho, Indian Territory, Nevada, North Dakota, Oklahoma, Tennessee, and Utah. Elsewhere the subsidies run from \$340 in Wyoming to \$725,554 in Pennsylvania, and cover percentages of cost varying from 0.5 per cent in Minnesota to 24.5 per cent in the District of Columbia. Other states having institutions receiving notable amounts are Georgia, Connecticut, Pennsylvania, Alabama, Maryland, Rhode Island, Maine, New Jersey, Arizona, and New York. Institutions in 29 states are helped through subsidies to the extent of less than 8 per cent of the cost of maintenance.

The total sum received by hospitals in payment for care of patients was \$12,181,484, which forms 43.2 per cent of the cost of maintenance. In 24 states, including some doing the largest hospital work, as New York, Pennsylvania, Massa-

chusetts, Ohio, etc., such income covers less than 50 per cent of the cost of maintenance; in 19 states it equals from 50 to 80 per cent of the cost of maintenance: in Indian Territory. Nebraska, North Dakota, and Oklahoma it was, respectively 94.1, 89.3, 96.5, and 82.9 per cent of the cost; and in Utah and Oregon the income actually exceeded the cost, the percentages being 116.2 and 109.7.

There is an apparent contradiction in describing hospitals as benevolent institutions when the amount of money they receive from pay patients is equal to or in excess of the cost of maintenance; but, in general, it should be remembered that to a very large extent the moneys termed income do not represent the personal contributions of the patients or their relatives and friends, but the amounts collected from the public authorities legally responsible for their support. Furthermore, the cost of maintenance as given does not include improvements or general equipment. A hospital may receive income, on account of patients, equal to or larger than the bare cost of running it, yet deserve the appellation benevolent, because it owes its existence to generous endowment, and because the services of physicians and attendants are not reckoned among the items of cost.

Although the dispensaries differ from other institutions in the respect that the persons frequenting them are occasional visitors rather than inmates, they are too conspicuous a part of the medical charity to be ignored. If certain out-patient departments had been counted as separate institutions, which would have been misleading, the total number of dispensaries would have been augmented. Dispensaries that are mere feeders to hospitals run for profit were excluded.

For 27 states no dispensaries were reported. About two thirds of the entire number (156) are found in California, Illinois, Maryland, Massachusetts, New York, and Pennsylvania. In other words, dispensaries as separate institutions are peculiar to large urban centers. Only 11 were maintained at public cost, and 17 were supported by churches, the re-

mainder (128) being under private control.

From 33 dispensaries no statements were obtainable in regard to the number of cases treated during 1904. The total given, 1,611,651, is therefore lower than the actual number, but gives a hint of the magnitude of the practically free medical service obtainable through the dispensaries. On the basis of the above total the number of cases treated in them to 100,000 of population was, for the entire country, 1,982.3. Nowhere has the system of medical dispensaries reached such a development as in the state of New York, or more particularly the city of New York. There the ratio of cases treated to 100,000 inhabitants reached the remarkable figure of 10,848.5, a ratio nearly twice as large as that for any other state.

Under the title permanent homes is comprehended a wide variety of benevolent undertakings. There are homes for aged dependents without means and for aged persons who can pay a liberal entrance fee, for persons afflicted with various incurable diseases or otherwise disabled, etc. Some of the homes make few distinctions as to the nature of dependence; others are devoted to a special class. To some only adults are admitted; others receive both adults and children, and are, in fact, permanent homes for adults, with orphanage annexes. A detailed classification of these institutions was not attempted, in view of the incompleteness of the data at hand for this purpose.

Arizona, Nevada, New Mexico, Oklahoma, and Utah are as yet without any permanent homes for dependents. The 753 whose existence could be traced are pretty evenly distributed among the states, allowing for the necessity of a proportionately large number in the older communities. In proportion to population Massachusetts leads in institutions of this character. Sixty of the permanent homes are reported as maintained by public authorities. Of those under private management (constituting a large majority) some are endowed

existence, to the munificence of individuals.

The permanent homes under church supervision are outnumbered by those termed private almost two to one, 13 states being without any. The states in which the ecclesiastical institutions of this kind form the majority are Connecticut, Illinois, Minnesota, South Carolina, Washington, and Wisconsin and the District of Columbia.

establishments and a few owe their origin, as well as continued

How many institutions are rendered practically self supporting through entrance fees is not known. There are undoubtedly some homes for the aged whose main assets from the first are the anticipated entrance fees, while in many more instances the homes appear to look to this income to meet only a part of the running expenses. Other homes are fairly well endowed.

SCIENCE IN PHILANTHROPY.

BY CHARLES RICHMOND HENDERSON.

[Charles Richmond Henderson, associate professor of sociology in the University of Chicago, is one of the world's foremost authorities on scientific philanthropy; he is a graduate of the old University of Chicago and of the University of Leipsic; he has traveled extensively in Europe and America investigating applied philanthropy more especially in regard to prison conditions; he is probably the best known American writer on philanthropic subjects.]

Those who look on only occasionally at the methods of dealing with the so-called degenerate classes often declare that nothing is really known, that guesswork reigns, that one plan is as good as another. This cynical despair of social science is not justified by the facts. As the science of life borrows data and suggestion from the hospital practitioner, so the student of normal society finds a laboratory in the institutions of defectives. Comte long ago said that sociology comes nearer actual scientific experiment in dealing with the defective than with the normal classes. In prisons and asvlums we can more nearly control conditions than we can with free self governing families and communities. Social pathology offers an important side light on normal human relations, because the laws of disease seem to be the seamy side of the laws of health, and show them in larger pattern.

Those who scoff at the possibility of building a social philosophy should recognize the fact that every attempt to concentrate all the forces of a commonwealth upon the solution of any specific problem more or less consciously proceeds upon some sort of theory of the ends and the resources of the commonwealth. The art of statesmanship, the organization of a school system or of a system of charities and corrections, imply a theory of the community which would properly be called a sociology, if it were more accurate and complete. It ought not to be regarded as a presumptuous attempt for special scholars to bring out into clearer light, with reinforcement of knowledge at every point and from every special science, a view of society as a whole, when every rural legislator and every superintendent of schools is actually proceeding on the

basis of sociology, often without thinking of his scheme of life under this somewhat novel title.

When a community distinguishes classes of abnormal men, it tacitly acts with a standard of normal men and normal society before its mind. When a people, by legal means or by voluntary associations, constructs a system of institutions for the care of its abnormal members, it acts upon a theory of the objects of society and the normal order of its arrangements. This practical coördination of the special knowledge of economists, lawyers, physicians, educators, is a necessity of life. Sociologists are simply struggling to make this coördination as adequate as possible. A special science out of relations to a general theory of society is as helpless and futile as the mainspring of a watch lying in isolated abstraction outside the watch itself.

Compare the methods of dealing with prisoners in the more advanced reformatories with that employed in backward communities, where the antiquated philosophy of vindictive justice dominates both law and discipline, and perpetuates the passions of lynching, feuds and murder. Modern criminology marks off, with increasing accuracy, the various classes of prisoners—criminals of passion, occasional criminals, habitual criminals, and those congenitally defective persons who should be in custodial asylums for imbeciles rather than in prisons. Criminologists lay stress upon the characters and capabilities of men; the traditionalists persist in relying on definitions of acts, and in seeking to measure exact guilt in terms of time. Science deals with knowable qualities; tradition and popular passion grope for a standard of the unknowable.

We have already a few reformatory prisons in which the more advanced methods of education are employed with hopeful results. A visit to one of these institutions for reformation, with its splendid equipment for regenerating the dwarfed and perverted offender in body, mind, and spirit, awakens admiration. But instantly the question starts in the mind: Why not use these appliances of education in advance of crime? Why not give our public schools the means of preventing the germination and formation of the anti social habit?

Indeed, all penological studies are driving us back to educational and other preventive measures. Reformation is costly and uncertain. Penalties have little influence upon minds not disciplined to foresight of consequences, incapable of connected reasoning. When wages are so low and fluctuating as they are in some ranks of labor, the prison becomes actually inviting, and its terror a paradise to many of the proletariat. Prison reform problems lead straight on to kindergarten and manual training, the trade union, the minimum wage, and related agencies of prevention and degradation. Expert judgment has long since declared that for the socially unfit, liberty is an injury to the individual and a constant menace to society. Legal innocence sets free the recidivist at the end of a brief sentence, while the wild beast in him is yet untamed and the enfeebled will is unable to resist temptation. This cruel policy of mathematical justice is sustained by custom and legal conservatism long after it is condemned by science. The sociological method of co-ordinating study is compelling the lawyers to bring fresh life into a formal text study, and just as truly compels theoretical specialists in anthropology to regard the legal point of view, the certainty, impersonality and impartiality of justice.

The most glaring contrast between expert knowledge and popular custom and law is seen in the legal administration of local institutions—the jail and the county poorhouse. The mere description of an ordinary jail should suffice to condemn it, and would awaken intense horror if the public could know and picture the necessary results of average administration. The local prison is used as a place for the detention of prisoners awaiting trial, sometimes of insane persons, and even of witnesses, as well as for the infliction of short sentences for minor offenses. Frequently, men, women, and youths are confined in the same building, not seldom within sight or hearing of one another. The corridors of many jails are occupied all day long by a motley company of prisoners of all grades of depravity. In this free school of crime, the uninitiated take lessons from adepts in licentiousness and burglary, and thoughtless children become the pupils and intimate companions of tramps and thieves. The local officials seem to have no standard of comparison. They seldom have any knowledge of the more civilized methods, and have contempt for theorists. In some instances of extraordinary foulness, where the jail may be in the court house cellar, the judges, if annoyed by odors and frightened by communicable disease, are ready, perhaps, to order an investigation. But the essential evils of the system are not merely defects in sanitation.

The detention of the insane even for a moment in a jail confuses nervous disease with crime, and helps to prolong the popular identification of insanity with demoniac possession or willful moral evil. The trial of children and youth in the same courts with older offenders, and their incarceration in jails and bridewells with adults, are causes of the perpetuation and increase of crime. Public opinion tolerates, through ignorance, the punishment of drunken and disorderly persons in jails. It is not felt by unbashful vagabonds as punishment. The district workhouse should provide actual disciplinary labor for a term long enough to affect the habits and character of the demoralized person. The jail should be merely a place of temporary detention before trial, and the cells should be so constructed that no inmate could ever see or meet any other. and those yet uncondemned should not be thrust into purgatory before trial.

The average county poorhouse is another pathetic and disheartening illustration of the tardiness of popular knowledge and belated legal reform. If ordinary citizens knew what almshouses in most regions of the country actually are. in construction and administration, they would demand a change. Stories of abuses come from all quarters. There is absence of classification. On poor farms, men, women, and children herd together, and sometimes sleep in the same dormitory, without even curtains between their beds. In remote places, the demented insane are neglected and treated like animals. Feeble minded women, irresponsible creatures. wander about the country, and return to the asylum to give birth to idiots and perpetuate defect. Honest old people. who have served their country in the army of productive industry for a half century, are shut in, during long winters, as intimate companions of worn out criminals. This does not

often occur, but it should never be permitted. Real working people have a right to protest with bitterness against this unjust confusion of misfortune and crime. If counties are too penurious to provide separate homes for the aged and help-

less poor, the commonwealth should interfere.

Several states have in their service, at this hour, a small corps of very competent officials in charge of the feeble minded. Out of about one hundred thousand of these hapless children less than one tenth are in expert custody. The others are scattered in homes, in poorhouses, wander about as vagrants, or find their way to prisons and asylums for the insane. Under competent care, this class can be supported in rural colonies almost without expense to the public, educated as far as their limited faculties permit, made comparatively happy in the society of equals, shielded from the humiliations and sufferings of competition, and prevented from propagating their defects. Here is the beginning of actual social selection. The more advanced states have already proved, under expert guidance, that charity the most tender is consistent with the elimination of the unfit.

The ability to maintain life in competitive industry is a rough measure of fitness for parental responsibilities. The feeble minded are not competent to care for themselves. It is believed that many vagrants have the hereditary character of these degenerates. Their turn for elimination will come next, and in the same merciful way, and then confirmed and hopeless dipsomaniacs may be treated rationally.

The most helpful philanthropy is that which deals with dependent and neglected children, and in this endeavor certain principles have been established beyond reasonable skepticism. We know that infants without mothers cannot live in large dormitories. When a city continues to keep its foundlings in a great institution, in face of the statistics of

mortality, it is guilty of their death.

The congregation in huge barracks of orphan and deserted children, past infancy, is now well understood to be injurious to them, so that the system of giving subsidies to church and other private institutions for the support of dependent children is a bounty on bad methods. It corrupts the conscience and blinds the judgment of good men and women: it dries up the fountains of voluntary benevolence, and it cripples the children. New York city and the state of California may be compared with Michigan and Minnesota, and the result will be ample evidence of the folly of the subsidy system. The policy of placing normal children in real homes, with natural family life and contact with ordinary community problems, may fairly be claimed as the only policy based on science. If experiment has any value in the study of the phenomena of society, then family care must be regarded as superior to institutional custody. The reasons are economic, physiological, pedagogical, and political. The expense of support in institutions is enormous; the health of children is exposed to needless perils of contagion; the artificial training unfits the young person for the actual world; and the relation of the institution to politics, especially if it is a private institution seeking subsidies from public funds, is almost inevitably hurtful.

Public outdoor relief, the assistance of dependent families in their homes, becomes more important with density of population and growth of cities. Students and administrators in this country are divided in opinion as to the necessity and wisdom of raising money by taxation for this purpose. Many believe that pauperism in New York, Brooklyn, and Philadelphia has been better cared for since official relief was abolished. But all acknowledge that, for a long time to come, a considerable sum must be given from voluntary or public sources for this purpose. In the distribution of this form of relief, general principles derived from long experience in many countries have been formulated, but are generally neglected

by the sympathetic public.

One who reasons from the world's best thought and knowledge would insist that each dependent person must be treated as an individual; that the relief should be temporary and the application frequently renewed; that the way to normal industry should be kept open at every step, and be made preferable to the path of indolence and beggary. Trained opinion favors a system of coöperation of all benevolent persons and officials, with a common central record, with information accessible to all who wish to aid the poor. The most successful

administration is that which reduces the material relief, and increases the capacity for self support; which tends to restore sound social relations, and lift the decaying parasite into independence and manliness. This view of outdoor relief is exacting, and calls for a high order of ability and a large

number of friendly visitors.

Surveying the actual practice in American cities, we discover that every one of these principles is constantly and flagrantly violated. The inquiry for causes is pronounced heartless. The friendly visitor is declared to be a cruel and impertinent meddler, who would substitute good advice for food and warmth. The attempt to bring order and bookkeeping into the chaos of almsgiving is condemned as red tape and presumption. Fortunate is the really thorough charity worker if he escapes the epithet of anarchist or communist because he discovers that individual and voluntary efforts are impotent in the presence of colossal misery, and because he invokes the cooperation of the entire community and the supreme

power of the government.

There are reasons for the slow rate of approximation of social practice to scientific demands. The public finds the consideration of defects disagreeable and painful. It is pleasant to think of education, art, industry, and literature; but criminals are odious and idiots repulsive in common thought. Our natural repugnance for defectives tends to awaken contempt. Genius is demanded to discover the essentials of divine personality in obscure intelligence and distorted nature. Comparatively few persons visit jails, prisons, and poorhouses, and most of these who do look about the abodes of misery with morbid curiosity alone, for they have no training in observation and no criteria of judgment. They simply disturb the discipline. It requires previous preparation and skillful guidance to derive benefit from examinations of this kind. Entrance is only too easily secured, in the case of public institutions in America; for an aimless ramble of sightseers, without knowledge or serious purpose, is positively harmful.

Our system of outdoor relief, both public and private, unlike the German municipal system, which provides as visitors a large corps of capable men who serve without salary, erects

a barrier between the broken citizen and the prosperous. Our official methods are bureaucratic in the worst sense; hard, mechanical, rigid in routine, awkward and often corrupt in administration. Our busy people, eager to be rich, farm out their philanthropy, and pay relief societies to distribute their alms and the remnants left from charity balls. Our educated and comfortable ladies and gentlemen know not how the other half lives. If the Elberfeld system could be introduced, or the Boston corps of friendly visitors be organized in all towns, we should know more of the meaning of struggle "down in the folks swamps."

The principal inspirer of philanthropic feeling in the world is the church. But up to recent times the leaders of the church have been educated in a way not very favorable to a wise direction of charity. The separation of ecclesiastical from political power has insensibly weakened the sense of responsibility for wards of the state. Our theological seminaries are just beginning to provide for a study of the methods which best represent the doctrines and practice of the founder of the church in relation to the distressed. Those who give direction to the studies of the church leaders have still to learn much from the saying of Dr. Arnold: "It is clear that, in whatever it is our duty to act, those matters also it is our duty to study." There is great reason to hope that another generation will take up the burden with ampler knowledge, wiser method, and more earnest consecration.

In pioneer conditions only the rugged and dauntless pushed to the frontier. Indians, fever, and hardship selected the feeble for extinction. Free land gave rude plenty to all who could survive, and pauperism was rare. But with our great cities have come new problems. Altruism must find a way to be merciful, and yet reduce the burden of the unfit. There is no prospect for the dependent classes in mere material alms. Many can be educated to self support, and to abandon the proletarian tendency to wear out mothers in bearing and rearing children who must starve on insufficient income. The feeble minded and degenerate cannot be taught this fundamental lesson. Fortunately, they are not very numerous, and can all be easily segregated in self supporting rural col-

onies. When they are removed, the real workers will rise in

earning power.

Perhaps the most important means of improving the formerly corrupt and barbarous local charities and prisons in England was the establishment of central supervision. The centralization of supervising power and function in the home office has lifted relief and corrective methods to a high level of efficiency and honesty. Most of our states, however, remain on the plane where England was before this vital reform was introduced. The court house ring is only too generally the despot over taxpayers and paupers. The improvement immediately manifest from recent laws in Indiana and Ohio, requiring the local almoners to report in detail to the state board of charities, is a startling evidence of the necessity for further changes in the same direction.

It is not desirable to discourage local interest in relief or disciplinary measures. Central control should seek to increase rather than to diminish the sense of responsibility of township and county administrators. The state boards which are now established in most of the more advanced states are usually advisory bodies, whose influence is felt in constant and skillful investigations, publication of abuses, distribution of information, education of the people, and guidance of legislators and administrators. The backward states, which have hitherto, through a mistaken notion of economy, refused to establish such boards, are sacrificing the money of taxpayers, the comfort and lives of the dependents, and the efficiency of penal machinery.

It is universally agreed that professional training is required for superintendents and assistants in institutions of charity and correction. But few persons will spend years in school and in subordinate apprentice service, unless they see before them a reasonable assurance that skill and fidelity will be rewarded with advancement and permanence in office.

The bearing of civil service reform on the improvement of our charitable and correctional institutions will be apparent. While all citizens should learn the essential principles of ameliorative method, it is absurd to expect administrative ability in all. The supreme social question in relation to public benefi-

cence is the question of securing trained officials, and keeping them in the full light of intelligent and sympathetic criticism. Progress in this matter depends upon concentrating the general thought and will on a single point, which for the present shall be civil service reform, with its examinations, eligible list, probation, promotion for merit, and security of tenure during the period of efficiency.

Never before in the history of our country was intelligence upon social obligations so general as now, and the process of education is going forward rapidly. The National Conference of Charities and Corrections, the National Prison association, the International Prison congress, have published a body of valuable thought. Naturally, the contributions are of unequal value, but the agreement of experts on important

principles shows that opinion is not provincial.

Social science has no ready made set of rules which can fit out a successful administrator; it does not pretend to offer a substitute for native talent, insight, sympathy, and technical training. But it ever remains true that the world's experience, as formulated in history and theory, is needed to correct the narrowness, egotism, and blindness of merely individual experience. It is a hopeful feature in contemporary philanthropy that associations bring together people of various kinds of knowledge and training, and that their publications increasingly influence legislation and administration.

Vol. 10-4

EDUCATIONAL PHILANTHROPY AS AN INVESTMENT.

BY ROBERT A. WOODS.

[Robert A. Woods, university settlement worker; born Pittsburg Dec. 9, 1865; graduated Amherst college, 1886; head of South End House, the university settlement of Boston, since 1891; lecturer on practical philanthropy in Episcopal Theological school of Cambridge; member Boston public bath commission since 1897.]

Copyright 1903 by Educational Review Publishing Company

Philanthropy has corrected its mistakes in large measure by taking to itself the motive of education, and, nowadays, every sort of philanthropy which is worth anything endeavors in all its undertakings to secure educational result. Not only that, it endeavors more and more, as all wise systems of education do, to put itself in a position to learn what the need The teacher must kneel before the child, must learn first of all from the pupil, in order that he may safely and effectually instruct the pupil. Educational philanthropy is educational, and has educational value because more and more it gives a great deal of time, takes a great deal of pains, in order to find out the actual conditions in which the people live who need

to be influenced and helped.

Mr. Seaver has pointed out to us very clearly that the problem of educational expansion is first of all a financial problem. In educational philanthropy that financial problem is gradually being met by the concrete demonstration that comes from re-An interesting study prepared by the institutions registration department of Boston, presents the statistics for juvenile arrests during the past ten years. It shows that during those ten years the number of juvenile arrests has decreased in a proportion varying from twelve to twenty per cent. statistician who has prepared these tables gives a tentative explanation for the decrease. He says it has resulted in the first place from wiser ways in dealing with neglected children, and in the second place from the manifold efforts which are now being made throughout the city, to direct youthful energy in healthful channels. When educational philanthropy can present results of that kind, when the information as to those results can by a sort of vital process and motive be got into the minds of thinking people throughout the city, such people are going to see the value of an investment of that sort, and are going to be willing to pay more in taxes for carrying on the work of educational philanthropy.

A great part of the effort of those who are endeavoring to promote educational philanthropy is to explain to intelligent persons throughout the community just what the need is of new enterprise in that direction, and to explain to such persons in very concrete fashion its definite results. In other words, educational philanthropy has a mission to the educated classes and the resourceful classes quite as distinctly as to those who belong to the less privileged ranks in life.

In the first place, those of us who are interested in this method feel very strongly there must be a greater extension of effort in the way of physical education. We have now, in Boston, a remarkable series of public baths, public play grounds, and public indoor gymnasiums. All of these institutions are used up to the limit of their capacity. The effort in the playgrounds and in the gymnasiums is constantly to raise the standards of instruction, and to make the opportunities of these institutions available in the fullest degree to both sexes and to adults as well as to children and young people. One very interesting use to which the gymnasiums are put is that of providing the right sort of physical training for young men who are later on to enter the city's service in the police department and fire department. Those departments are an object of ambition to many young men in different parts of the city. These young men now find a chance such as they never had before to get the appropriate training. Since the city gymnasiums began their work five years ago the standard for the physical examination for entrance into these departments has risen nearly twenty per cent. It was formerly about sixty five per cent; it is now over eighty per cent. Here in very definite fashion is a result which the intelligent taxpayer must in due time take account of. He must begin to see that it is an excellent financial investment for the city to provide agencies through which the men who are going to serve the city in important ways in the future shall

receive a suitable training, and through which a higher and better type of man can be secured. Those of us who are interested in these city gymnasiums believe that before many years go by we shall be able from definite statistics to prove that there has been a raised standard of public health, of public morals, and of the productive capacity of the mass of the people in the city as the result of the opportunities which the gymnasiums furnish. If that proves true, it is going to be possible to put before the thinking taxpayer a result which will show the value in dollars and cents of this

type of public investment.

Then too, educational philanthropy concerns itself with what can not be spoken of more accurately than to call it social education. A great many people think that settlement work concerns itself largely with gaieties. It does. boys and girls in settlement clubs are more interested in dancing and in amateur dramatics than in anything else. But we find that interests of this sort may be made the means for securing the most important educational results. Often you can secure points in character when you speak of deportment which you never could secure in any direct way. Very often you can accomplish in your dancing class certain ends which you could not accomplish in your Sunday school class, in the way of permanent growth in character. I have many times seen boys that had never really made any achievement in their lives before, who undertook to present a little play, and who, perhaps, got tired before their parts were learned, and almost had to be galvanized into carrying rehearsals through and presenting the little play at the end; but having given the play in the face and eyes of their friends and neighbors, those boys came to have that wonderful sense of having brought something to pass, and the finished result gave them a self respect and a confidence which they never otherwise would have had. Achievement has registered a distinct upward step in the lives of those boys.

In these simple ways educational philanthropy attempts to take the social life of crowded neighborhoods, to begin with it where it is, and to direct it along helpful channels. We are beginning, I think, in all our great cities to see the absolute need of just that sort of social training. It is a curious fact that we are very slow about taking progressive steps for public improvement until we are compelled to. The history of sanitary improvement in the cities both of Europe and of this country will show that great steps in the direction of sanitary imimprovement have rarely been taken except as the result of some dire plague. Cholera or smallpox has compelled the cities of Europe and America to organize their boards of health and to develop thorough, effective methods for urban sanitation. It may be that that will also be true with regard to the moral health of the city. Certainly those who have watched the condition of things on the east side of New York during recent years must have seen that there is a moral contagion and pestilence that comes out of the life of a great tenement district, which in due time, by sure compulsion, will necessitate on the part of the city, either privately or publicly, the careful, systematic organization of such facilities for social intercourse as shall lead in the direction of intelligence and character instead of toward moral destruction.

And then, too, educational philanthropy concerns itself quite definitely with experiments in the direction of training for vocation. One of the things that strike you most strongly in the life of a working class district is the fact that boys and girls, as they leave our public schools, have no sort of training to fit them for entering upon some permanent employment. To a very large extent when they leave the grammar schools, they go into some sort of calling which is essentially juvenile. The boys become messenger boys or go into the newspaper or bootblack business, while the girls become cash girls in great stores. The difficulty with those callings is, that a young person will follow them for three or four years, and at the end of that time be no farther on in his substantial preparation for a life work than he was at the beginning. It is highly important that we should develop educational resources for training those young people to fulfill some increasing use in The task of educational philanthropy, wherever it is found, is to a very large extent that of endeavoring to fit boys and girls during the years after the grammar school stage, for taking up some definite industrial career.

Another significant aim of educational philanthropy is that which was suggested by Dr. Felix Adler when he said that just as there are life saving stations along the seacoast, there should be talent saving stations along the shores of poverty. Throughout this country I believe only about six per cent of the boys and girls get beyond the grammar school. In a city like Boston, possibly as many as twenty per cent go beyond the grammar school, though that is perhaps a high estimate even for Boston. This means that eighty or ninety per cent of our boys and girls do not get beyond the grammar school. Take twenty per cent for Boston. That is, roughly speaking, the proportion of the population which may be credited to the professional and commercial classes: the working classes amounting to about eighty per cent of the population of a great city. Speaking roughly then, the children of working class families do not go beyond the grammar school. Any one who has worked in a crowded district in any of our great cities knows that there are numerous cases of exceptionally bright boys and girls who are prevented from going on into the secondary school on account of the poverty, or ignorance, or indifference, or all three combined, of their parents. It is certainly an anomalous situation that if a boy or girl can persevere through the secondary stage and get as far as the collegiate stage, he finds very great resources to help him on through the collegiate stage of his education; while large numbers of promising boys and girls are stopped in the course of their education, at the beginning of the secondary stage. It seems to me there could hardly be any better investment of money than through the provision of scholarships by which exceptionally bright boys and girls whose parents are poor, too poor to second them through the secondary stage of their education, could be sent on through the high school. Some efforts are now being made in that direction, and there is certainly no more interesting line of experiment for educational philanthropy.

I feel very strongly that it is necessary for all of us to take upon ourselves the responsibility of educating the thoughtful people in the community as to the place which education has in the building up of the community. We take that fact too much for granted ourselves, and we do not take measures to have other people understand it. For instance, in the city of Boston, with its enormous expenditure, involving enormous drain upon the taxpayers, a great part of the expenditure which comes through taxation goes to support institutions which gather up the evil results that come from a bad and bungling scheme of civilization, from an insufficient system and scheme of education. The city hospital, which is one of the finest institutions of its kind in the world, is yet rendering a service, the need of which might be in part obviated. The city hospital costs more than a thousand dollars per day. We have our houses of correction which cost \$600 per day. We have our almshouses, and institutions for neglected children; we have our police force, which comes next to the public schools as an item of public expense. The question is going to be asked before long, from a purely financial point of view, whether there is not some way by which a portion of this vast outlay for the negative, superficial treatment of social evils can be cut off. In due time we shall be able to show to the hard headed taxpayer that by the establishment of public baths, public gymnasiums, public playgrounds, by experiments in the direction of educational philanthropy, a way may be found to cut off some of that expense, and to relieve the city decisively and permanently of some of that burden.

But there is a far more forcible line of argument in support of these experiments in the direction of educational philanthropy. The prime source of the wealth of any country or of any city consists in the productive capacity of its people. We have been depending all along upon importing productive capacity into the city from the village, American and European; but we have got to learn some way now, by which we can develop productive capacity within the lights of the city itself. It is only through a broad thoroughgoing system of education that will touch all sides of life, and provide for all the practical needs of life, that we shall be able to develop that productive capacity. And if we can show to the thoughtful citizen, that education is reaching out in order to bring to the light, and to bring into full power the variety of latent productive capac-

ity that is born into the children of the mass of the people, then I believe that we shall have an invincible argument in favor of a higher rate of taxation for educational purposes, and larger appropriations for the support of educational enterprises.

JEWISH CHARITIES.

BY LEE K. FRANKEL.

[Lee K. Frankel, magager United Hebrew Charities; born Philadelphia, August 13, 1867; instructor in chemistry, University of Pennsylvania, 1888–93; director Jewish Chautauqua society, 1897–99; member and secretary Ellis Island commission, appointed by President Roosevelt, 1903; assistant secretary National Conference of Charities and Corrections, 1902; in charge of summer school of philanthropy, Jewish Chautauqua society, 1902–03; chairman committee on needy families in their homes, National Conference of Charities and Corrections, 1905–06. Editor, Jewish Charity.]

Copyright 1903 by American Academy of Political and Social Science

On April 26, 1655, the board of directors of the Dutch West India company wrote to Governor Stuyvesant as follows: "After many consultations, we have decided and resolved upon a certain petition made by certain Portuguese Jews, that they shall have permission to sell and to trade in New Netherland and to live and remain there, provided the poor among them shall not become a burden to the company, or to the community, but be supported by their own nation."

The records of the department of charities of the city of New York now show that in a Jewish population approximating 600,000 in Greater New York, in the almshouse on Blackwell's island there are seventeen pauper Jews, of whom the majority were blind, idiotic or possessed of some peculiar defect which prevented admission to existing Jewish charitable

institutions.

What is true of New York Jews is true of their coreligionists everywhere. The Jew has always cared for his own poor. During the biblical period, the wise and humane laws of the Mosaic code made the welfare of the unfortunate a civic duty, and specified the manner in which assistance was to be given in order to do the least harm to the recipient. After the destruction of the commonwealth, the common woe which followed the dispersion brought into play new forms of charitable effort to meet the need and distress occasioned by the acute poverty of the people. It is the irony of fate to say that the Jews provided for their poor during the middle ages and the centuries which preceded and followed them. Jewish charity was sectarian through compulsion. When every man's hand was raised against the Jew, rich or poor, it followed that any

charitable provision for the latter class must of necessity be arranged by the former. And the pity of it all was that the charity of the Mosaic legislation was not narrow and sectarian. It could and did include within its scope the stranger and the non-Jew. It was broadly humanitarian, having regard for the servant as well as the master. It was a world wide scheme of philanthropy, the like of which is not to be found to-day, since it was grounded not merely on the bases of love and pity, but on justice. The gleanings of the field were not given to the poor man as a gift, but as his due. Similarly the tithes were exacted from all, rich and poor alike, in the nature of an assessment to carry out the principles of justice and righteous-

ness on which the charity law was based.

In our modern day, under more favorable conditions and auspices, the Jew has, to some extent, reverted to the nonsectarian idea, in his philanthropies. Hospitals, as a rule, supported and endowed by Jews, throw open their doors to sufferers irrespective of creed, color or nationality. Other instances could be cited of charities not medical, organized along similar lines. The free employment bureau of the United Hebrew charities makes no distinction with its applicants. The educational alliance offers its clubs and classes to Jew and Gentile alike. Jewish agencies, giving material relief, or to use a better term, those which care for the needy in their own homes, in the main confine their work to the beneficiaries of their faith, without, however, making any rigid distinction. On the other hand, the trend of Jewish charity has been in the direction of caring for the Jewish poor, solely through Jewish agencies, and without the intervention or cooperation of other sectarian or nonsectarian societies or institutions. Such a condition of affairs is the resultant of the compulsion of the centuries. The task which was at one time assumed of necessity has to-day become a proud duty. What in Stuyvesant's day was obligatory and mandatory, is to-day accepted as a voluntary responsibility.

To what extent and for what length of time the care of the Jewish poor may remain exclusively in Jewish hands, it is impossible to say. The question is hardly a religious one. Jewish poverty is due mainly to economic and industrial causes. It is true that religious persecution is largely at the bottom of these causes, but the condition which such persecution has produced is not to be overcome by any organization or set of organizations founded on purely religious lines. If the impoverished Jew requires the interference of his wealthier coreligionist, it is because the latter is better able to understand his needs and has a peculiar, specialized knowledge of a peculiar class of individuals. Were it possible for public charities or for nonsectarian private charities to grasp the fundamentals of Jewish poverty, to obtain that keen insight into the modes of living and thought of a heterogeneous people whose common meeting point is their religion, an insight so necessary to bring the proper forms of relief into play, there is no reason why the poor Jew should not be the recipient of the charitable impulse of the entire community. The Jew's religion per se is not a factor in the solution of his physical needs. It is characteristic of his history that the greater his poverty and distress, the greater has been his religiosity and his steadfastness to his ethical and religious convictions. It is a far cry, however, to the time when the Jew will be able to lay down his self assumed burden and delegate it to others, not only ready and willing to shoulder it, but competent to unravel the intricacies of the Jewish character, whose roots are deeply grounded in centuries of tradition. For the present the Jew must care for the Jew.

The problem of the Jewish charitable societies of the United States to-day is the problem of the care of the immigrant. As such, it passes beyond merely local lines. In some of its manifestations it is national in character and in few it has an international significance.

The fact that the large bulk of the needy Jews in the United States reside in New York is accidental, and concerns the Jews of Denver and San Francisco equally with those of the eastern seaboard cities. Insofar the problem is a national one. Moreover, to deal intelligently with the question requires a knowledge of the immigrant's antecedents, the impelling motive which brought him to the United States, and

an acquaintance with his previous environment. And here

the international phase of the question comes in.

Roughly speaking, it may be said that there are no American born Jewish poor. Of the 10,061 families who applied for assistance to the United Hebrew charities of New York during its last fiscal year, 2 per cent were born in the United And of these the majority of heads of families were of the first generation. Jewish dependents who have an ancestry in the United States of more than two generations are practically unknown. Nor can it be stated that there have ever been enough native born dependent Jews to make an issue, since the Stuyvesant episode. In the report of the president of the above society for the year 1881, the statement is made that during no time since the formation of the society had there been less want than during the first six months of the fiscal year just ended. It must have been gratifying to those present at the meeting to learn that after all the poor in the city had been given adequate relief, there was still in the society's treasury a comfortable balance of over \$14,000. During the following year, so large were the receipts of the society and so small the demands of the regular recipients, that the balance in the treasury at the end of the year had swelled to nearly \$19,000.

In the year 1881 began that great wave of emigration from eastern Europe, the end of which is not yet. Driven by a relentless persecution, which endangered not only their homes but frequently their lives, thousands of Jews were compelled to flee from their homes to seek new residence on these shores. The Russo-Jewish committee which originally undertook the work of caring for these immigrants turned it over very shortly to the Hebrew Emigrant Aid society, which came into existence in December, 1881. In one year this society spent \$250,000. \$50,000 less than had been spent by the United Hebrew charities of New York in the seven years of its existence. first and only annual report of the Emigrant Aid society, its president outlined as tersely as possible the efforts that had been made to provide homes and occupations for the thousands of fleeing exiles who reached these shores during the momentous summer of 1882. In the month of July the committee spent for board and lodging alone over \$11,700. Of the herculean efforts of the members of the committee, of the sacrifices of time and money, the report in its modesty makes but scant mention. The full history of the Emigrant Aid society is yet to be written.

With the gradual falling off in immigration, the Emigrant Aid society went out of existence, and the care of the needy immigrant who remained in New York and who became impoverished after residence, reverted to the United Hebrew charities. In 1885 immigration again began to grow heavier, and continued to grow in such numbers that in the following five years over 120,000 immigrants arrived at Castle Garden. In 1890 the immigration reached the figures of 32,321, the

largest number ever recorded up to that time.

With all that had been done, the real work of the charities was but to begin. In 1891 the religious persecution of the Russian Jews reached a climax. In the year ending September 30, 62,574 immigrants arrived at New York, of whom nearly 40,000 arrived between June and September. The entire charitable effort of the New York Jewish community was for the time directed out of the ordinary channels and applied to this monumental question of caring for the arriving Russian Jews. The Baron de Hirsch fund, instead of utilizing its income for its educational work, appropriated over \$67,000 to the United Hebrew charities to assist in the work of the immigration bureau. Over \$175,000 was spent by the United Hebrew charities during this year. In September of 1891 it became apparent that there would be no cessation to the immigration, and that much larger funds would be necessary to give anything like adequate assistance to the unfortunates who were arriving at the rate of 2,000 per week. thusiasm which was aroused at a banquet tendered to the late Jesse Seligman brought into existence the Russian Transportation fund, which added over \$90,000 to the revenues of the United Hebrew charities and which was given by citizens of New York, irrespective of creed. Later in the year, a standing committee of the society known as the Central Russian Refugees committee was organized, and was made up of representatives of the Baron de Hirsch fund, the Russian Transportation fund, the United Hebrew charities and the American committee for ameliorating the condition of the Russian exiles. The last committee was organized to secure the coöperation of relief societies in other cities, in order that the various European societies who were assisting the persecuted Russians to emigrate should thoroughly understand the attitude of the New York organization.

The year, October, 1891, to September, 1892, will ever be a memorable one in the history of Russian emigration and of Jewish philanthropy; 52,134 immigrants arriving at the barge office in that time. The treasurer of the United Hebrew charities paid out the enormous sum of \$321,311.05, of which \$145,200 was spent by the Russian Refugees committee between February and September. Like the Hebrew Emigrant Aid society, the history of the central Russian Refugees committee is still to be written. At present it is included in the bald statement of a treasurer's report. Should it ever be published, it will tell a tale of devotion, of altruistic effort, of sacrifice, of noble charitable impulse unparalleled in the his-

tory of American Judaism.

Since the year 1881, fully 600,000 Jewish immigrants have arrived at the port of New York alone. Of these the bulk comprise refugees from Russian and Roumanian persecution. Austrians and Galicians. They come from countries in which many of them lived under conditions of appalling poverty. The records of the immigration bureau show that from the standpoint of material wealth, these immigrants are below the average of immigrants from other European countries. Due to their previous condition a goodly percentage is illiterate. On the other hand, the number of skilled artisans and craftsmen is so large as to be distinctly noticeable. From the standpoint of dependency, it will be of interest to study to what exent this large body of immigrants has added to the dependent and delinquent classes of the communities in the United States. The only figures that are at hand are those of New York, which are higher than would be found in other cities and towns, for reasons that are obvious.

In December, 1899, the writer made a study of 1,000

families who had originally applied to the United Hebrew charities for assistance in October, 1894. Of these 1,000 applicants it was found that 602 had not applied for assistance after December, 1894. Of the balance, 67 families were dependent on the society to a greater or lesser extent in January, 1899. More detailed investigation disclosed the fact that nearly all of these 67 applicants were made up of families where the wage earner had died, leaving a widow with small children, or of respectable aged and infirm couples unable to be fully self supporting, or of families in which the wage earner had become incapacitated through illness. In other words, after five years over 93 per cent of the cases studied were independent of charitable interference.

While the above study was limited in its scope, and while the deduction which can be drawn from it must be accepted with reserve, it is nevertheless typical of Jewish charitable conditions. The marked feature in the care of the Jewish poor in the United States is the almost entire absence of the so-called pauper element. Even the sixty seven families above mentioned can not be included in this category. Widowhood is the resultant of purely natural conditions, and when it afflicts the poor mother with a family, it frequently produces a condition of dependence which has in it no characteristic of demoralization. The brightest and most hopeful chapter in the history of Jewish charity is the avidity and eagerness with which its beneficiaries, bereft of the main wage earner, become self supporting and independent as soon as the children are old enough to contribute to the family income.

If there is one cause more than another leading up to this condition, it is the absence of the drink evil among the Jews. The instances in which drunkenness lies at the bottom of Jewish dependency are so infrequent that they may be ignored. Combined with the absence of this vice, there are other virtues engrafted on the Jew for centuries, all of which tend to the preservation of his self respect and his self esteem.

Among these are the love of home, the inherent desire to preserve the purity of the family, and the remarkable eagerness which he shows for education and self improvement. Poverty with the Jew does not spell degeneracy. He has known it too long to fear it, and even through its worst invasions, he has come forth stronger, more confident, more self reliant. Poverty he knew in darkest Europe, where it was forced upon him. He brought it with him when he came to the United States, and under the beneficent environment which encompassed him here, he has escaped from its clutches to a large extent. The small percentage who become or remain dependent after a residence of any length in the United States are influenced by causes extraneous to the individual, and which are mainly the product of their environment.

What these causes are will develop subsequently.

This detailed exposition of Jewish poverty is timely, in view of the fear that has been expressed of late, that continued Jewish immigration, together with other immigration from oriental Europe, may develop potentialities harmful to American customs and thought. It is feared that pauper elements will be introduced into American life, which may become obnoxious and detrimental. A discussion of the question is outside the province of this paper. So far as the Jew is concerned, the fear is without warrant of fact. The history of the Jewish charities in the United States demonstrates nothing more forcibly than that the Jewish immigrant, be he German. Russian, Roumanian or Galician, readily adapts himself to his American environment, easily assimilates the customs and language of his adopted country, and even though he may temporarily require assistance, rapidly becomes independent of charitable interference. The immigrant Jew is frequently poverty stricken. He is rarely a pauper, in the sense in which the word is most commonly used. He is not found in the besotted, degenerate, hopeless mass of humanity constituting the flotsam and jetsam of society, the product of generations of vice and crime and debauchery, which makes up the scum of our present civilization. Given the opportunity and the proper surroundings, the immigrant Jew will become an addition to the body politic and not a menace.

From what has preceded, it will be comprehensible that the Jewish charities of the United States, having a special problem with which to deal, have instituted special methods for its solution. In the main, relief organizations have followed the organized methods of sister societies. In the past twenty years, new organizations of all kinds have sprung into existence to meet the demands made by the constantly increased immigration. To revert to New York, when the Central Russian Refugees committee went out of existence in January, 1893, the decrease in immigration no longer warranting its continuance, the active work of assisting the arriving immigrants devolved upon the United Hebrew charities.

The work of this society will be cited here somewhat in extenso, since it is typical of similar Jewish organizations throughout the United States. The report of the fiscal year ending September 30, 1902, shows that 10,061 individuals and families applied for assistance. Of these, 5,603 had applied for the first time. Material relief was granted to 8,125; 1,270 were found not to require assistance of this kind, and 666 were refused assistance for some cause or other. The society conducts an employment bureau which is free to employer and employe, and during the last fiscal year found employment for 5,112 applicants. It grants relief in kind, including groceries, clothing, shoes, furniture, etc. The extent of the society's work in this direction will be gathered from the statement that 48,802 garments and pieces of furniture were distributed last year. The annual disbursements for material relief alone amount to over \$110,000 per annum. Ever since its organization twenty nine years ago, the society has endeavored to uphold the principles of organized charity. In some instances it has antedated the charity organization societies themselves. We need but mention the giving of relief in amounts adequate to make the recipient independent of further intervention on the part of the relief giving agency, and the establishment of a graded, carefully regulated and supervised system of pensions covering if necessary a long period of years. As a rule, these pensions are given only to families where the wage earner has died, and where, unless such provision were made, no recourse would be left, except the breaking up of the family and the commitment of the children to orphanages and similar institutions. To obviate the necessity of such commitment, the United Hebrew charities disburses annually over \$30,000 in pensions. In the history Vol. 10-5

of the society there is no form of relief which shows such good returns for the investment made. Families so supported do not become pauperized, since the subsidy which is granted enables the surviving parent to devote her time to the proper rearing of her children so that they may become useful and intelligent citizens. To such children the society stands in loco parentis. Dependency of this kind does not lead to degeneracy. Where the home can be preserved, where children can develop under the care of the natural guardian, there is little likelihood of dependency extending to succeeding generations. So far as the Jew at least is concerned, this fact has been too often and too amply evidenced to require further illustration.

A word may be said here on the question of adequate relief. In the revulsion which accompanied the indiscriminate almsgiving of earlier decades, the so-called organized charities which resulted therefrom frequently went to the other extreme and withheld material relief in the fear of its baneful effect on the recipient. Nothing is more characteristic of our present day charities than the gradual return to the sound doctrine that material relief is not the end desired, but merely a means to the end, and that it must be used, if necessary, equally with other forms of relief, and must be given adequately if at all. Jewish charity has always upheld this belief. Granted dependency, and material relief in many instances follows. Its danger lies in giving it as a dole. If it must be given, let the amount of it be proportionate to the applicant's needs and not to the amount that can be obtained from a more or less charitably disposed community.

Along these lines the United Hebrew charities frequently grants assistance, presumably as a loan, in amounts varying from \$50 to \$250. These loans are made in special cases, where it is not possible to make the applicant self supporting through the ordinary channels of employment, etc. A wage earner who has been incapacitated through illness or injury and hence unable to follow any routine work, may still be established in some small business venture and be able to support his family. Thousands of dollars have been spent by the United Hebrew charities along these lines with the most gratifying

results—not only have beneficiaries become independent of the society, but many of them have managed to repay the loans made to them.

Of all the problems which confront the average charity organization, possibly the most perplexing is the one of the family in which the mother must be the wage earner. The kindergarten and the day nursery have by no means solved the problem. They are at best but makeshifts in an attempt to solve a situation which has its root in economic and industrial conditions. Again, the factory removes the mother from her sphere of influence over her children, and opens an opportunity for the growth of incorrigibility and waywardness on the part of the latter. In the hope of partially overcoming this difficulty, the United Hebrew charities has for some years conducted a work room for unskilled women in which the latter are taught various needle industries, in the hope that they may eventually be sufficiently accomplished to work in their own homes, and in this fashion supplement the family income. The amount of such work that can be found is limited. More and more, daily, the factory is competing with home industry. to the exclusion of the latter. A study made by the society last year showed that work could be obtained for women to do at home in industries such as silk belt making, men's and women's neckwear, garters and hose supporters, paper boxes, slip covers for the furniture trade, over gaiters and leggings, dressing sacques, hats and caps, flowers and feathers, beaded purses and other beadwork, dress shields, incandescent light mantels, embroidery and art embroidery, passementerie work, bibs, knit goods, etc. In the society's workroom the effort has been made to teach such industries to unskilled women, so as to enable them to become at least partially self supporting.

It is needless to state that in a system as comprehensive as the United Hebrew charities desires to be, provision has been made to alleviate distress in all its forms. Under the plan of dividing the city into districts, immediate relief can be given to emergency cases. These districts are in charge of coöperating societies known as sisterhoods, who are responsible for the condition of the poor who have been placed in their care. Each of these agencies is practically a miniature United Hebrew charities. Not only have they organized centers for the distribution of material relief, but along the lines of a more progressive philanthropy, the sisterhoods have developed day nurseries, kindergartens, clubs and classes of various kinds, employment bureaus, mothers' meetings, and in fact have become a social center for the poor of their neighborhoods. Since a large percentage of the distress which is met with is occasioned by illness, medical relief of all kinds has been organized. Each district as a rule has its physician and its nurse, and where these are not at hand, coöperation has been effected with other organizations specially equipped for such work.

In very recent years, the spread of tuberculosis among Jews has merited the earnest attention of the society, and among its other activities it has been a pioneer in developing a systematic plan for caring for such tuberculous applicants in their own homes, for whom no provision could be made in existing sanatoria. The campaign thus begun has been not only a charitable, but a social one. Not only have these unfortunates been given food, nourishment and medical care to aid them towards recovery, but in addition thereto, instruction has been given them in the rudiments of sanitation, and in the prevention of infection. It is significant that the work of the United Hebrew charities in this field has been followed to some extent by the recently organized committee on tuberculosis of the Charity Organization society. So successful have the United Hebrew charities been in this undertaking. that it points with pride to the beneficiaries who have recovered their health and who have been made self supporting in outdoor pursuits in such a manner that the likelihood of a recurrence of the disease has been materially lessened.

As stated before, the work of the United Hebrew charities of New York has been cited in detail, since it illustrates the methods adopted by practically all relief agencies in the United States. The name United Hebrew charities, as applied to the New York organization, is somewhat of a misnomer, since it does not include all Jewish charitable agencies in the city of New York. It would be more proper to speak of it as the consolidation of all the purely relief societies which existed in New

York prior to 1874. Aside from these, there are to-day hospitals, orphanages, technical schools for boys and girls, trade schools, day nurseries and kindergartens, guilds for crippled children, burial societies, loan societies, societies for maternity relief, and a goodly number of smaller organizations which have been founded by the immigrants of the last twenty years.

It is estimated that there are over one thousand Jewish organizations and societies in the city of New York to-day, whose activities to a greater or less extent are directed along philanthropic lines. Practically all of the larger organizations, such as the hospitals, etc., work in coöperation with the United Hebrew charities. It is only a question of time until even the smallest will direct its activities in consonance with the work

of the central society.

In some of the other cities in the United States, where the question of the care of the poor is not so complex as in New York, closer coöperation has gone by leaps and bounds. In cities like Philadelphia, Cincinnati, Chicago, Cleveland and others, the individual societies have formed federations of charities, the purpose of the federation being to express the philanthropic impulse of the community in terms of greatest economy, the smallest amount of friction and the highest possible efficiency. In Philadelphia the federation is the common treasury. It acts as the common collection agency of all moneys, and distributes them pro rata among the various societies and institutions whose autonomy is not impaired by this method. In other cities, this plan with some slight variations is in force.

In addition to these local federations, the various societies throughout the United States have joined together to form a national body known as the National Conference of Jewish charities. At present it comprises the relief organizations of

fifty three cities.

At the meeting of the National Conference of Jewish charities held in Detroit, the writer introduced a resolution advocating the establishment of a central bureau for the placing out and boarding out of dependent Jewish children in private homes. At that time the work of devising such a plan was delegated to the independent order of B'nai B'rith,

a fraternal Jewish order, which at present has the entire subject under discussion, and has drafted a plan which has been submitted to the various Jewish societies and institutions

throughout the country.

Some idea of the extent to which Jewish charities have been developed in the United States may be gathered from the following: In practically every city and town there are benevolent societies which look after the interests of the poor in their midst. Jewish orphan asylums are established in the cities of Atlanta, Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Newark, N. J., New Orleans, New York, Philadelphia, Pittsburg, Rochester and San Francisco. In New York there are three institutions and in Philadelphia there are two. New York has four Jewish hospitals, and Philadelphia has two. Baltimore, Chicago, Cincinnati, Denver. New Orleans and San Francisco have each one. Homes for the aged and infirm are found in most of the large cities. Similarly, educational movements along philanthropic lines are developing throughout the country. These include organizations such as the Hebrew Educational society of Brooklyn, the Hebrew Education society of Philadelphia, the Jewish Training school of Chicago, the Hebrew Free and Industrial school society of St. Louis, the Hebrew Industrial school of Boston, the Clara de Hirsch home for working girls, the Hebrew Technical school for girls, the Hebrew Technical institute, and the Baron de Hirsch trade school, the last four being situated in the city of New York. The Maxwell street Settlement of Chicago and the Neighborhood house in St. Paul are under Jewish auspices. Cincinnati, Milwaukee and Cleveland have Jewish settlements. In New York the educational alliance, the largest institution of its kind in the United States, has within the past few years developed a settlement with resident workers.

Earlier in this paper reference was made to the fact that much of the Jewish dependency in the United States and in particular in the large cities is due to causes that are not inherent in the individual but are objective and not subjective; in other words, are a product of his environment. Of the million Jews in the United States nearly 600,000 reside in

the city of New York and of the latter over 50 per cent reside in one square mile of territory on the east side of the borough of Manhattan. The recent agitation in regard to tenement house legislation in New York is still too fresh in the minds of students of this subject to require much further mention here. It will be remarked, however, that in the campaign which was made to preserve the vital features of the present tenement house law, the Jewish residents on the east side of New York were a unit in demanding that no drastic changes in the law be made. Similarly at a recent municipal election, it was the citizens and voters of this same district who rose en masse and in a campaign that was startling in its uniqueness and originality, purged their neighborhood of the vices and immorality which existed there. And this brings us to the

point at issue.

Whatever views the interested may have on this subject. it can not be denied that there are limits to the housing of individuals in a restricted territory. Family life can not be properly maintained without a certain amount of privacy, and one of the essentials for the procurement of the latter is a sufficiency of room. The danger to morals which lies in overcrowding, is due primarily to the inability to carry on a natural home life. The unit of society, after all, is the family, and the preservation of the latter means the preservation of the social fabric. With this thought in mind, it is not difficult to understand how a people, who through the ages have been heralded as the champions of purity in the home, have through the conditions under which they live, taken on some of the attributes of their surroundings and absorbed some of the deteriorating effects of their environment. The natural concomitants of overcrowding are disease and vice and crime. The Jew's power of assimilation is proverbial. It is but natural therefore that he, along with his Christian neighbor, should be attacked in his moral fiber in the overcrowded tenements in which he lived: that he should contract diseases which were new and strange to him, and to which he had formerly not been liable. In fact, his apparent immunity to tuberculosis to-day, in spite of conditions, is a medical anomaly. The wonder is that a greater percentage of the Jewish popuation residing in the so-called Ghetto of our large cities has not fallen victims to the vices and diseases which breed there. The concern of the thinking Jew lies in the fact that the percentage of Jewish vice and crime and disease as found to-day in our large cities, small as it may be, is nevertheless distinctly larger than statistics show to have been the case heretofore. To the student of affairs, there is a menace in a condition of things which on its face shows such dangerous possibilities. Referring to New York in particular, it cannot be denied that the city, through its geographical position, has peculiar limitations with respect to population which cannot be overstepped without a serious injury to the community. As a matter of fact, certain sections of the city, particularly those in which the poorer elements of the population live, have long since passed the boundaries of normal housing, and there has resulted a harvest of poverty and vice, crime and disease which are the adjuncts of such abnormal congestion.

So far as the Jews are concerned, nothing could be more indicative of these conditions than the amount of so-called juvenile delinquency. In the house of refuge on Randall's island, there are over 200 Jewish boys and girls. In the juvenile asylum there are 230 Jewish children under sixteen years of age committed for various misdemeanors. Compared with the entire Jewish population of the city, the number is insignificant, and the ratio will probably be found to be considerably lower than that of the general population. To the Jewish philanthropist and sociologist, there is cause for alarm in these figures, because he sees that the crowded life of the streets, the lack of playgrounds and breathing spots, the absence of proper home surroundings, have injurious effects on the Jewish child, to whom the simplest legal misdemeanors were in the past unknown. And what is true of the child is true of the adult. Whatever parasitic poverty may exist among the Jews in the United States and in particular in New York, whatever percentage of criminals and vicious persons may have developed, the results are in the main due to the overcrowding and congestion, to which their poverty

How can an increase of these evils be averted? The

has subjected them.

remedy is plain and at the same time simple. The unfortunates, whom poverty and oppression have thrown together in such close proximity and who are compelled to live under such unnatural conditions, must be given the opportunity to settle in localities where ample room will be given for normal, physical, intellectual and moral growth. In New York, with characteristic insight, many are realizing the impossibility of full development in their present restricted environment and are taking up residence in the less settled outlying section of the city. There is no doubt that the improvement in transportation facilities, resulting from subways and tunnels, will considerably diminish the population of the east side. To effect large results, some comprehensive scheme is necessary to relieve the congestion and to prevent the possibility of a recurrence of this congestion.

So far as the dependent Jewish classes are concerned, no scheme of philanthropy that can be introduced into the congested Jewish quarter of New York city can be more than palliative, that will permit of a continued increase in the number of residents of that section. More hospitals may be built in the city, more orphan asylums be endowed, settlements and neighborhood work of all kinds be organized, and double and even treble the amount of money be spent in direct relief—all these agencies can be only remedial in nature. They are not distinctly curative. All of them, to use the words of Miss Richmond, merely tide over the sufferer into the miseries of next week. The causes which underlie the Jewish dependency as found in large cities are fundamental, and relief to be permanent and preventive, must strike deep enough to reach the roots. An increase in institutions and agencies working under the existing conditions may, if any thing, increase the number of applicants for assistance. There is no doubt that the presence of relief organizations, orphanages, etc., in a community, tends to weaken the moral responsibility of many a wage earner through the consciousness that if he shirks his obligations to his family, society will assume them.

For this reason scientific Jewish philanthropy must develop along the lines of placing those who are now dependent and those who may become dependent, in such economic con-

ditions that they may become independent. They must be located in communities and in surroundings where industrial competition is not so fierce that they can not, even with the best of effort, earn living wages; where it will not be necessary for relief organizations to expend a greater portion of their energy in supplementing insufficient earnings; where housing and living conditions are not of such a kind as to aggravate the trouble instead of improving it; where the wage-earner may have a chance to rear a home in the true sense of the word, to educate his children, to breathe fresh air and to live under sound sanitary conditions. There is one way to accomplish the above,—by the removal of large bodies of wage earners with their families to other cities, and in particu-

lar to towns throughout the United States.

Two years ago the Jewish Agricultural and Industrial Aid society of New York city undertook to distribute Jewish residents of New York city, who were willing to go, to other places in the United States, where work had previously been found for them. In the first year the society sent out 1,800 persons, in the second year 3,200 persons. The plan of the society is to find industrial positions anywhere in the United States, and having found them, to obtain individuals able to fill them from New York and other large cities like Philadelphia, Chicago and Boston. In order to carry on the work as effectively as possible, the society cooperates with the independent order B'nai B'rith, which has lodges distributed throughout many of the smaller towns and communities in the United States, and with the benevolent organizations and societies represented in the National Conference of Jewish charities. It has an office in New York city known as the industrial removal office, which is the center of the activities of the society. From here all applicants who desire to leave the city are sent away, provided with the necessary transportation and with the guarantee that provision will be made for them at their destination until such time as they become full fledged wage earners. Should conditions require it, it is not uncommon for the society to send the wage earner in advance and to make provision for the care of the family remaining here through the United Hebrew charities. As soon as the society hears from its correspondent that the wage earner is in a position to care for his family, the latter is sent on and a re-

union of the family accomplished.

The value of such a movement as this can not be over estimated. The United States still has possibilities for thousands and even hundreds of thousands of new immigrants. There are still vast tracts of territory unexplored and which in time will offer excellent opportunity for new settlers. Following out this thought, the organization above mentioned distributes families to points as far south as El Paso, Texas, as far west as California, and as far north as Winnipeg. no section of the United States has been ignored where it is possible to obtain work, nor has the employment sought been confined to any particular trades. All classes of laborers have been sent away, both skilled and unskilled. Aside from the fact that such a scheme as this will in time remove thousands from the congested centers of the large cities, its value for the future, however, lies in the fact that with each family sent away from New York city, or from Philadelphia, or from Boston, a new nucleus has been formed for the immigrant who may come in the next ten or twenty years. At present 70 per cent of arriving Jewish immigrants remain in the city of New York. The reason for this is obvious. The man who emigrates to the United States goes by preference to that place where he has either relatives or friends, or to the destination for which in many instances relatives have provided him and his family with the necessary transportation. So far as the immigrant himself is concerned, it matters little to him whether he goes to New York or to Saginaw; what he asks is an opportunity to earn his living for himself and his family. If 70 per cent of the Jewish immigrants remain in New York city, it is because practically all of the immigrants of the last twenty years have remained here. With the new nuclei and the new foci that are being formed in all sections of the United States through the movement inaugurated by the Jewish Agricultural and Industrial Aid society, there is every likelihood that the percentage of Jewish immigrants remaining in New York will be decreased year by year. Finally, under the conditions existing in other communities, the Jews will again be able to renew the home life which is characteristic of them. Granted the opportunity to earn a living, to live decently in the sight of men, there need be no fear of an increase of Jewish dependency. In time the seaboard cities will be but stopping places en route. In time there will be built up throughout the length and breadth of the United States, Jewish communities whose least concern and least expense will be the care of the dependent and poverty stricken in their midst.

EMERGENCY RELIEF IN GREAT DISASTERS.

BY EDWARD T. DEVINE.

[Edward T. Devine, professor of philanthropy, Columbia university; general secretary of the Charity Organization Society, and editor of Charities; born Union, Hardin county, Ia., May 6, 1867; graduated from Cornell college, (Iowa) 1887; fellow at the University of Pennsylvania in 1891 and 1893; served as a lecturer at the Oxford Summer school in England. He has also been staff lecturer on economics for the American Society for the Extension of University Teaching.]

Copyright 1903 by The Outlook Company

Fortunately, the need for charitable relief in American communities is comparatively rare. It is not, as it has elsewhere become, a usual feature in the life of the ordinary laborer. Abnormal immigration, industrial crises, a wasteful and unwise relief policy, and such disasters as a great city fire, the overflowing of rivers, or the destructive sweep of the tornado, have caused at times acute and even widespread distress, which has led to the adoption of emergency relief measures.

The questions arising from immigration—like those arising from the presence of a race problem in the southern states —although they are essentially relief questions in a broad sense, are not of an emergency character, and are too complex to be dealt with briefly as a part of the present article. The problem of hard times and the distress caused by industrial displacement must also be set aside for the present; although it is enumerated as one which is not to be disposed of by a consideration of such national policies as the currency, the tariff or other form of taxation, imperialism, or the management of trade unions. On the contrary, in every period of depression and unemployment there is likely to arise a need for exceptional relief; and in a progressive society in which mechanical processes are rapidly discarded to make way for better processes, such needs are likely to increase rather than diminish.

The demand for relief which is created by unwise philanthropy or lavish expenditure for public relief may likewise be passed over; although there is no doubt that a considerable part of the existing dependency is due directly to such causes.

Immigration, hard times, industrial displacement, the

congestion of population, and the race problem, are all to be considered as exceptional causes of distress, with which we shall one day know how to deal effectively. They are unlike sickness, accident, and death of the bread winner, unlike mere industrial inefficiency and moral defects, in that all of the latter can be remedied only by changes in human nature, or by the slow, if steady, advance of science; and vet all of these are but phases of the general problem of relief. Those who are to shape national and local policies must come to look upon them as parts of a general problem, to solve which clear and definite views are essential. From these we may distinguish, as less complex and baffling than many of the others, the task of dealing with exceptional emergencies—such as are caused by fire, flood, and famine. In the presence of such disasters as those at Heppner, Oregon, Armourdale, Kansas, and Martinique, there can be no doubt of the need for quick and effective assistance, and there can be no doubt of the wisdom of considering the lessons to be gained from the study of such dis-

asters, after they are passed.

The first lesson which is written large in the experience of those who have been called upon to deal with such disasters is the folly and wastefulness of relying upon inexperienced, untrained, or incompetent agents for the distribution of relief and for the constructive work without which relief distribution may easily be productive of more harm than good. There are always at such times novel problems to be solved, but the experience of other communities under similar or analogous conditions will aid in their solution if it can be brought to bear. It may be, as at Chicago after the great fire, that the problem is primarily one of relief pending the resumption of trade and industry. It may be, as at Johnstown and at Heppner, that the problem of sanitation and public safety is equally important; or, as at Martinique, that the destruction of life is so complete that little relief is required except for the transportation of the few survivors for whom no means of livelihood remain. It may be that, as in Paterson after the fire and flood of March, 1902, and the tornado of 1903, the community as a whole remains self supporting, even though one portion is severely taxed to supply the necessities of other portions that

have especially suffered, and that as a consequence no outside relief is needed; or, on the other hand, as at Galveston after the inundation in September, 1900, and at Kansas City, Kansas, 1903, that all classes have been so uniformly stricken that outside relief is imperative; or it may be, as at East St. Louis and adjoining villages, that relief is provided in sufficient quantity from towns and cities in the immediate vicinity, although not in sufficient amount from the stricken town or city itself.

It is indispensable that there shall be a quick perception of the essential features of the existing situation in those who would lead a community and outside sympathizers to a wise conclusion in the face of impending or accomplished destruc-

tion of life and property.

When it has been decided that there is need of relief, whether in the form of money, of transportation, of labor, or of whatever form, then there should be summoned an executive, if such a one can be found, who is endowed with financial capacity, a knowledge of human nature, experience in dealing with men, and acquaintance with the peculiar and difficult problems constantly arising in the attempt to relieve suffering and distress without injury to the self respect of those who are to be aided, and without injury to their neighbors. If the problem is a large and complicated one, numerous subcommittees will be requisite and a staff of assistants. There should be searching inquiry into the claims for relief where the facts are not fully known. The bureau of inquiry inaugurated at Johnstown by Mr. Tom L. Johnson, of Cleveland, speedily became one of the most important features of the whole relief system, and upon it eventually devolved the real decision as to the persons to be aided and as to the amounts they should receive.

There should be an executive committee, whether called by that name, as in Chicago, or by some other designation, thoroughly acquainted with local conditions and in constant touch with the relief operations. Whether this committee should have the full responsibility, or should itself be responsible to a larger board or commission, will depend upon various conditions, and especially upon the extent of the area

from which donations are received. If contributions are made from distant communities, it may be advisable that there should be representatives upon the controlling body from such communities, or at least there should be as members of it citizens of sufficient reputation and standing to inspire a feeling of confidence even in the most distant places. After the Johnstown flood, a commission was appointed by state authority on which there was comparatively little local representation, and the principal responsibility in Johnstown itself, during the period of greatest need, rested upon what was known as a finance committee. Although there are advantages in an authoritative and widely representative commission, such as that which was then created, it is doubtful whether the resulting delays and the lack of familiarity with the actual situation are not fatal objections. It is certain that commissions, if made at a distance, should be influenced by the opinions of those who are on the spot. In any event, the real responsibility will naturally rest principally upon the local executive committee and its executive. The committee should lay down the principles on which aid is to be extended, and full responsibility for carrying them into effect should devolve upon the executive.

Material should be preserved for the publication of a detailed report, including a detailed financial record both of receipts and disbursements. This is not only due to contributors and to the public as a guide in future emergencies, but it is of advantage to those who are responsible for the relief measures, in order that, if criticism or controversies arise, a full statement can be made. The fire report of the Chicago Relief and Aid society and the report published in Calcutta of the Central Executive committee of the Indian Famine Charitable Relief fund of 1900 may be cited as models of most complete and elaborate reports; and, although of briefer compass. the report of the secretary of the Johnstown Flood Relief commission, the report of the Jacksonville (1901) Relief association, and the report of the Minnesota State commission for the relief of fire sufferers (September, 1894; report printed 1895) are equally explicit and valuable as sources of

information.

The failure to publish similar reports, or, indeed, anything that can be properly called a report or a financial statement, is one of the just criticisms made against the American National Red Cross. This society has taken part in the relief of the sufferers from the forest fires in Michigan in 1881, from the overflow of the Mississippi river in 1882 and of the Ohio in 1883, from the Mississippi cyclone in the same year, from the overflow of the Ohio and Mississippi in 1884, from the drouth in Texas in 1886, from the Charleston earthquake in the same year, from the Mount Vernon (Illinois) cyclone in 1888, from the yellow fever epidemic in Florida in the same year, from the Johnstown disaster in 1889, from the inundation, hurricane, and tidal wave of the South Carolina coast in 1893 and 1894, and from the Galveston flood.

In connection with these various enterprises, and others in which the Red Cross has been interested, large sums of money have been contributed to the Red Cross society, but for their disbursement no suitable public accounting appears to have been made in any instance. In the pamphlets and addresses issued by the society such paragraphs as the following take the place of definite statements concerning what was actually done and what relation such action bore to the relief work of other and often more important agencies:

"The secretary brought together the women of Johnstown, bowed to the earth with sorrow and bereavement, and the most responsible were formed into committees charged with definite duties towards the homeless and distraught of the community. Through them the wants of over three thousand families—more than twenty thousand persons—were made known in writing to the Red Cross, and by it supplied; the white wagons with the red symbol fetching and carrying for the stricken people."

It is principally considerations of this kind that have led to the recent remonstrance from some of the most prominent members of the Red Cross society, and to an attempt, thus far unsuccessful, to bring about a reorganization of its management, especially on the financial side.

In times of great calamity, such as we have been considering, there are many who are ordinarily self supporting who

find themselves suddenly bereft of property, of accumulated savings, of the means of livelihood, and even of the barest necessities of life. The disaster may befall a community of high industrial standards, with few, if any, paupers or public dependents—a community in which there is little lawlessness and crime. Under such conditions, the principle of indemnity as distinct from that of charity may well have a very general application. The principle of indemnity is that of the fire insurance companies, and, in a modified form, also that of the life and accident insurance companies. It implies the reinstatement of the beneficiary as nearly as possible in the position from which he was hurled by the calamity which has befallen him. It implies that to the householder shall be given the use of a house, to the mechanic his tools, to the family its household furniture, to the laborer the opportunity of remunerative employment. For the community as a whole it means the speedy restoration of such commercial and industrial activities as have been temporarily suspended, the rebuilding of bridges, the reopening of streets, the re-establishment of banks, business houses, churches, and schools. It requires that protection shall be given to the defenseless, food and shelter to the homeless, suitable guardianship to the orphan, and, as nearly as possible, normal social and industrial conditions to all. The charitable principle takes account only of the necessities of those who apply for aid; the principle of indemnity gives greater weight to their material losses and the circumstances under which they were previously placed. It is a vital question whether the principle of indemnity might not properly have a wider application to ordinary relief than has usually been given to it, but we may be certain that the pauperizing effects supposed to result from liberal relief have not been found to follow the most generous attempts to avert completely the paralyzing and direful consequences of such disasters as we are now considering. Both in Chicago and in Johnstown hundreds of families were placed by gifts of money, or of house furniture, clothing, and tools, in a position practically as good as that which they had occupied before the fire or the flood respectively. There is ample testimony that in practically all instances good results were obtained from this policy.

In Chicago harmful consequences in the subsequent charitable history of the city have been traced to a retention of a portion of the money by those who were its custodians; and in Johnstown there was unquestionable hardship from the delay in its distribution and from the early indiscriminate grants made without knowledge of the circumstances of claimants; but in neither city were there well founded complaints of the results of discriminating and judicious disbursements in large amounts made with the avowed purpose of putting the recipients in a position to carry on their former or equally appropriate vocations.

On several occasions the usefulness in great emergencies or detachments of the standing army which have happened to be near at hand has been demonstrated. The perfect discipline and the organization constantly maintained in the army may save days at a time when even hours are of the greatest importance. The national guard of the various states might render, and in some instances—notably at East St. Louis, Illinois, 1903—has rendered, similar service. The suggestion made by Dr. F. H. Wines in the Charities Review for June, 1898, that soldiers are of great utility as an aid in emerergency relief work, was based upon an experience in the relief of sufferers from an overflow of the Ohio river at Shawneetown, The detail which came to his assistance on that occasion consisted of a sergeant and nine men, and their special duty was that of patrol and other similar service. Dr. Wines found that even then twenty men would have been better. Dr. Wines recommends that where any portion of the population of a given community requires the shelter of tents, a temporary canvas city provided by the state or nation should be organized and remain under control of the military authorities. By maintaining strict military discipline the inhabitants of the emergency camp at Shawneetown, slightly exceeding at one time two hundred in number, of whom two thirds were negroes, were at all times under thorough control. By the aid of the military force it became possible to provide for these refugees a care so sympathetic and paternal that it produced no pauperizing impression.

For the temporary camp in Kansas City, Kansas, tents

were supplied from the federal post at Fort Leavenworth, and for the similar but smaller camp on the Missouri side, for residents of Kansas City who had been driven from their homes by the flood, tents were supplied by the state militia; and in both cities detachments of the national guard were called upon for patrol duty. One of the principal reasons for such a military patrol is the temporary disorganization of the community. The local constabulary is likely to be demoralized and excited, and the presence of state militia gives confidence and security

to people who need temporary moral support.

While soldiers may profitably be employed in the manner that has been indicated, it will not ordinarily be found advantageous to place upon them responsibility for relief or for remedial measures. Military discipline has its limitations as well as its advantages, and it would unfit the average soldier or petty officer to exercise that discriminating judgment and personal influence which are so essential in dealing with people who have suddenly lost their possessions and require aid and counsel in readjusting their affairs and regaining a foothold in the industrial system. At the earliest practicable moment the ordinary municipal authority should be established and the necessity for military patrol overcome.

At Johnstown one of the most interesting chapters in the history of the few months succeeding the flood is that which deals with the restoration of municipal borough authorities to the full exercise of their functions. In some of the boroughs affected by the flood there was left no building in which a meeting of the borough council could be held. Self constituted committees had temporarily managed police, health, and fire departments, and later such duties had been in part assumed by state authorities. Gradually, however, the adjutant general, representing the state government, sought out those who had been duly chosen to perform such duties, arranged suitable meeting places for councils and public boards, and transferred to them the duties which it had again become possible for them to perform. No legal or other controversies arose in connection with these ultra constitutional arrangements, and no act of the legislature was thought necessary to legalize what had been done in the interval during which ordinary municipal

activities were suspended, or the acts performed by the reorganized and restored municipal authorities.

One suggestion which is frequently made is that relief in emergencies should never be in money, but always in its equivalent. This suggestion is not to be adopted without consideration of the character of the proposed beneficiaries. It is probable that, so far as disbursements from public funds are concerned, the policy suggested is wise, and that provision of employment where emergency relief measures are necessary is still better than relief in kind. Instead of opening free shelters, depots for free food and for the distribution of clothing, as early as possible a reliable list should be made, based upon a knowledge of the portion of the community affected by the disaster. In Baltimore, after the recent tornado, the police, under the direction of the marshal, prepared a census of all the families residing within the storm area. When a reliable list of this kind has been prepared, applications may be compared with it and intelligent decisions reached as to the relief required.

The conclusion reached by the Johnstown Flood commission to make a distribution of money was eminently justified by the conditions that there prevailed. It was then proposed. and indeed at one time it had virtually been decided by the commission, instead of dividing the money in their hands after providing for various special needs, to establish large warehouses and fill them with clothing and other necessaries of life, to be distributed as occasion might require throughout the ensuing winter. The change of plan was made because of earnest and emphatic protests from prominent citizens of Johnstown who were personally acquainted with the people for whom this scheme of relief was proposed, and who appreciated the absurdity of applying to skilled mechanics and prosperous trade people the principles which are based upon distrust either of the honesty or intelligence of ordinary applicants for relief.

One can not commend the methods of those almoners in Johnstown who, instead of placing their funds in the hands of the relief committees, passed through the streets handing tendollar bills to every one whom they met. The criticism, however, lies not against their use of money, but against their lack of discrimination and common sense. Many of those to whom grants of one thousand dollars and upwards were made instantly became engaged in active industry and trade, and within a few months, except for the loss of relatives, neighbors, and friends, might have looked upon their experience as a nightmare to be forgotten in the waking hours of renewed active life. It is probable that so large a sum has never before been poured into a community of equal size with so little damage to the personal character of the citizens and so complete an absence of any pauperizing or demoralizing influences. In the opinion of good judges resident in the city both before and after the flood, this is due in part to the fact that money was given, and that those who received it were left free to decide

for themselves how it should be expended.

Two other considerations may be suggested. Special emergencies display in a high degree the need of local cooperation. In meeting such distress as is caused in populous communities by a tornado or a serious fire, there is a place for the activity of the chamber of commerce or merchants' association, or some other representative of the business interests of the community. The task relative to the large sums of money usually requisite can best be undertaken by some such body. Any appeal having their indorsement will be likely to meet with generous and quick response. There is a place also for the charity organization society, or bureau of charities, or provident association, or some other general agency whose officers and agents are trained in investigation and in the administration of funds. It may also be expedient, if no such general agency is in existence, to call upon the churches or upon such denominational bodies as the society of St. Vincent de Paul and the Hebrew charities. There may also be a need for children's aid societies or the representatives of orphan asylums to care for children who are left without guardianship; and there is almost always an urgent demand for physicians. for a temporary ambulance and hospital service, and for trained nurses. Often the aid rendered by volunteer private citizens is more valuable than that of any organized agency, and often the absence of organized relief makes it imperative that private citizens shall undertake to do what is essential, whether from choice or not.

This leads to my final suggestion, which is that in the presence of even a serious disaster leaders of public opinion should attempt to preserve in the public mind a due sense of proportion. Even in the presence of urgent need at a distance, the continuing and probably equally imperative needs at hand should not be forgotten.

It is not surprising, in view of the frightful loss of life at Martinique and its proximity to our own shores, that the New York committee should have received some eighty thousand dollars more than they could disburse, in spite of an announcement by the committee that it would not take additional contributions. This was in part due to the fact that the eruption occurred in foreign territory, and that public appropriations

were made both by the United States and France.

I would not be understood as discountenancing large and immediate responses to such appeals. By no means all that is given to meet special emergencies is deducted from ordinary charitable resources. There should, however, be cultivated a sane and reasonable examination of the probable need; and the citizen who gives, even with great liberality, should not on that account consider himself free from the obligation to consider also the needs of his immediate neighbor. The city, even in prosperous times, through its quick industrial changes and by the very conditions of life which it imposes, places upon some weak shoulders burdens which are not rightfully theirs, and which it is the duty—and it is an agreeable duty—of their neighbors to share.

THE BUILDING OF HOSPITALS.

BY HOLLIS W. FIELD.

(Hollis W. Field, author and editor; born Williamsburg, Mo., April 10, 1865; educated in the public schools of Missouri; began his career as a writer on the Kansas City Times, and afterwards became city editor of the San Antonio Express; removing to Chicago, he became connected with the Chicago Record, of which paper he became editorial writer and literary editor; writer of many articles for magazines and periodicals, chiefly on scientific and business topics.]

Considering the building records of the civilized world to-day, it is one of the anomalies of these first years of the twentieth century that one of the oldest institutions of man is

experiencing a distinctly boom period.

More hospitals are building or in course of organization and development in proportion to their numbers than there are of any other one kindred institution in the educational or religious world. The relation of the tubercle bacillus to consumption and of the mosquito to yellow fever are the two great stimulating discoveries leading to the hospital move-

ment of the present.

It was the hospital method that free' Havana of yellow fever after an unbroken record of 120 years' subjection to the disease. It was the same hospital method, that, under supervision of United States authorities in Manila, reduced that city's death rate to the rate credited to Washington, D. C. Soap and water, vaccine virus, fire, and mosquito netting have been the direct agencies for these accomplishments. Hospital and sanitation have come to be synonymous in their meaning to the medical profession, and to the practitioner the possibilities of careless infection are more to be considered to-day than the chances of cure to the infected.

Thus in a double sense the hospital boom is active. Under modern conditions the sufferer is put into the hospital ward for his own convenience and ease, while in many of the contagious and infectious diseases he is there for the safety of his fellow men.

Fifteen hundred years before Christ the Egyptians had hospitals for the care of the sick. Job is said to have main-

tained forty tables for male strangers and twelve for widows, the inference being that of these wayfarers there were the sick and ailing to be cared for. The history of the hospital dates back 300 years before Christ even in Europe, while in the fourteenth century there were 19,000 such places in that continent. Many of these institutions were of Roman Catholic origin, and to-day all over the world these hospitals under the care of the church are legion and wielding a tremendous influence upon the

ills of both the flesh and the spirit.

Burdett quotes figures from 2,000 hospitals in the British islands having an income of \$36,500,000. In the United States are nearly twice as many institutions in that category, with an income in proportion, save as the small hospital in the small town is increasing, and thus lowering the aggregate. As an index of the British interest in the hospital funds of the islands, the queen's jubilee year in 1897 brought \$4,700,000 to the hospitals of the kingdom, while the ordinary hospital Saturday and Sunday in Liverpool may net \$115 to the 1,000 of population. As an index of the interest in the United States may be taken the tens of thousands of dollars donated every year by private individuals to the establishment of these institutions, and the hundreds of thousands that are voted by state legislatures for the establishment of new hospitals for specific diseases—especially for tuberculosis.

The number of hospitals in New York and in Chicago in proportion to the death rate of these cities is significant of the hospital's importance in the metropolitan city. New York with 140 hospitals in 1904 had 96,000 deaths inside the Greater New York boundaries, while Chicago, with 62 hospitals, had 26,311 deaths. Naturally the hospital figures much more largely in the cure of diseases than in the easement of the dying; if death be expected, the home may be the ideal place for dissolution; but if sanitary treatment for a curable ill is desired, the hospital is ideal. To the extent that the death rate may suggest the totals of the sick and maimed in those cities these figures are enlightening. Yet it is in these large centers of population in all the United States that the greatest

hospital movement is felt.

Tuberculosis is the agent of the movement. The dis-

covery of the disease germ and the proof of its infectious nature have done more to force the hospital idea upon the modern world than has any other discovery of the pathologist. Out of this knowledge of this most dreaded malady the hospital method in general has received its greater momentum among the people.

Counting the 111,650 deaths from tuberculosis and apportioning the average death to every six having the disease in the United States, there were 666,354 cases of tuberculosis in this country last year, every one of which, in the judgment of the modern physician, should be segregated in some manner from the rest of the community and be led to observe and respect the laws, written and unwritten, against infection.

The latest idea in this line is the consumptive hospital that shall be erected by the state along institutional lines, involving the expenditure of hundreds of thousands of dollars, and the home hospital, which may not be more than a tent in the back yard, or a cot bed in the attic, either bed to be used winter and summer, through the sunshine and the rains.

The first hospital to be established by a state for the care of consumptives was the Muskoka cottage sanitarium at Grevenhurst, Ont., in 1897. This was for paying patients, and the result was so successful that another was established there five years later for the care of those unable to pay, the two institutions having a capacity of seventy five patients each. Since this experiment across the border, the United States has taken up the movement through its individual states until there is scarcely a geographical division in the union that is not interested in the establishment of a hospital for tuberculosis patients. New Jersey, for instance, has let the contracts for a sanitarium to cost \$225,000 exclusive of its equipment, the buildings to occupy a tract of 600 acres.

To-day in the United States and Canada there are 135 institutions distributed through the states and provinces for the care of consumptives to the number of 8,400. Almost one third of these patients are cared for in the states of New York and Pennsylvania. Fourteen of these institutions were established in 1902, twenty four in 1903, and twenty one in

1904, the growth indicating the interest that is awakening to the subject.

But if scores of the larger institutions are springing up for the consumptive, there are hundreds of individual sanitariums springing into form in the country, in the country town, and in the still more crowded city. To-day there is scarcely a case of tuberculosis in the United States which has not been brought to a realization of its infectiousness and the sufferer schooled to sanitary precautions against its spread. Somebody has said of the small sanitariums in general that a good doctor with one patient in a shanty in a pine forest makes a sanitarium that is bound to grow.

One of the proposed new experiments with the tuberculosis hospital movement is the establishment of the hospital on a community basis which shall leave the patients to live in the hospital and yet be within reach of their work or their interests, whatever they may be. The idea is especially adapted to the small town and city where, owing to the absence of a municipal water supply and modern drainage, the threat of tuberculosis may be more than normal. In such a place the establishment of a hospital, built after the best sanitary design, offers a home better than the average boarding place, in which the sufferers are under supervision and yet within reach of their work, presupposing that under modern conditions the sufferer from the disease will be discovered and admitted before he has lost vitality to the extent of disability.

The small town which only a few years ago looked upon the hospital as one of the institutions of the great city, comparing in a measure with a city prison and poorhouse, has come to look upon the hospital as a necessity for even the small community. There are hundreds of towns and cities, with from 4,500 to 7,000 population, where the hospital is looked upon to-day as one of the first institutions of the corporation. The citizen of the small town has been educated to the hospital method. He has learned that the home primarily is for well persons, just as the modern hospital is pre-eminently the home for the sick, and injured, and suffering. He has learned that treatment for the suffering may be better administered and more cheaply in the small hospital than in his home. He is

spared much of the anxiety of having the sick one in his home, where domestic work must be continued. For the mildly contagious diseases, too, the community shares the relief that

comes of the segregation.

The hospital idea is every where. The hospital tent, the hospital ship, and even the hospital cruise into the arctic circle for the benefit of the tuberculous sufferer, are accepted to-day without a thought of question. It is only from the inner circle of the hospital managerial circle that one occasionally hears a murmur of disaffection.

One of these, recently recounting his experiences in the work, recalls with some bitterness that in all the category of hospital work of the country so little of system has been evolved for the common good of the institution. Among the superintendents whom he knows, for instance, he recalls a few physicians, a ward boss, an ex-newspaper reporter, a china factory hand, various clerks, and an assortment of clergymen. More business methods in an institution where business methods should pay big dividends is his cry, even to the extent of taking the hospital from the medical man and giving it over to the layman.

INSTITUTIONS FOR THE BLIND.

BY G. L. SMEAD.

[G. L. Smead, superintendent of the Ohio State school for the blind at Columbus, O., has been for years one of the leading authorities on the education of the sightless. He has devised many plans for adding to the productivity of their labor and making them self supporting in part. He has also introduced many novel methods into the school of which he is in charge and has delivered addresses and written articles telling of his theories.]

In Ohio, and I presume in other states, we have to contend against the asylum idea. Our school has been called the blind asylum from the beginning, and at the present day this name is oftenest upon the lips of the public. This may be partly due to the American tendency to give the shortest name to every thing, and then push on to pleasure or business. We have hardly time to call any thing by its full name. designate thousands of miles of railroad by a few initials. Ohio state university is O. S. U. A laboratory is a lab. A gymnasium is a gym. The young ladies in the co-educational schools are called co-eds. In one state university the young ladies' waiting room is the gab room. A bicycle is a bike. And the sacred name of Christmas is cut short into Xmas. What wonder then, if some should give as short a name as possible to institutions for the education of the blind and call them asylums with the A sometimes left off. But the use of the term asylum in some sections of our state, at least, signifies an ignorance of the true purpose of our schools for the blind. I have had many contentions with friends of imbecile children for their admission to our school. Even members of the legislature have urged the admission of such children. A long petition of citizens was once presented to me for the same purpose, and that too after the child had been repeatedly rejected. We have applications from paralytics and epileptics and from those too old to go to school. And, what are your terms for the admission of patients? is a question sometimes asked, as though the school were a hospital. The board of state charities counts us as proper members of the association of charities and corrections, and we, as officers, are appointed delegates to the state and national conventions of that body. And in our code of laws we have been classed as benevolent institutions.

As American institutions for the blind, what are we then? Are we infirmaries, or asylums, or hospitals, or charitable institutions, or are we schools pure and simple? Some years ago we changed the legal title of the Ohio school, from the Ohio institution for the education of the blind to the Ohio state school for the blind. The Ohio school was founded for the instruction of the blind, and this change of title was urged by our alumni in protest against even the suggestion that it is

any other than an educational institution.

The National Educational association, in Boston, recognized our schools as belonging to the educational system of the United States by giving a place upon the program to a presentation of our means and methods of education. The educational purpose of our schools is, I think, recognized by all the educators of the blind in the country. The influence of the American association of instructors of the blind is upon this side of the question. By resolution this association, in convention in Raleigh, North Carolina, in 1902, expressed the approval of that body, of a real affiliation with the National Educational association, and that in connection with that association there be a department of special education.

But how shall we exclude the principle of charity from our schools for the blind when so many extra things are being done for them? We feed them, clothe them to some extent. and supply means of instruction in literature, music, handicraft, and physical culture. We employ expensive apparatus in these different departments of education. If the educational department of our schools costs fifty dollars per capita. probably twenty dollars is for music, which is an extra in schools for the seeing; and then board and clothing, are not these so much more than the expense of seeing schools? ing at the question from a civil point of view, not from the sentimental side, what is the object of the state in educating its youth? Good citizenship is the bulwark of the nation. She is strong in proportion to the intelligence and integrity of her citizens; and the state is to so educate her children as to make of them self reliant, worthy men and women, who shall

exalt our homes, and be an honor to our country in peace and in war. The true warrant for a free education is good citizen-To this end the government through its officers may establish schools, appoint teachers, build school houses, furnish them, select text books, make them free to those unable to buy them, compel attendance, and tax the people for their support. All these things we are doing for our schools for the seeing; and more, we are giving in our state universities the opportunity for a college education, and for special, technical training, in great part free; and all this that our young men and young women may be fitted for a more advanced and useful citizenship in the application of science to the useful arts. These students thus trained are to be our teachers in the specialties to which they have devoted themselves, whether it be domestic science, agriculture, engineering, mining, or manufacturing. They are to be leaders to train others for useful citizenship. The equipment of our common and high schools, of our state universities, the large number of students attending them, and the lavishing of money for their support, all witness to the fact that we do not consider this expenditure a charity, but a necessity for the highest development of our citizenship.

But there are a part of our youth who are handicapped by the loss of hearing or of sight. What shall we do for them? Even in a horse race, allowance is made for a handicap, not for charity's sake, but to give an equal chance in the race. And may we not in the education of the blind do somewhat more in the way of help to an education than we do for our more fortunate seeing children, and still not call it charity? Has not a blind man a right to be a good citizen? Is he not under the same obligation to be such, as the seeing man? Shall we not give him a fair chance to enjoy that right, and to meet that responsibility? Are not these added facilities necessary to the best, universal development of our citizenship? Are not we who are more fortunate exalting our own citizenship in helping our weaker brother to be, with us, a good, responsible citizen

of the best country that God has given to man?

But how shall we help our handicapped brother and sister?

By supplying as well as we can the means by which his deprivation may be covered and counteracted. By putting into

his education such extra facilities as will make up to him in some measure what he lacks. We have our five or six senses given us to meet the conditions of this earthly life. What other special senses might have been given us, or will be given us in a higher state of existence, we do not know. Certain it is that there are some qualities of matter, of force and of mind which we have no special sense to perceive. We see as through a glass darkly in respect to many things that attract our curiosity. But with our present senses we know, perhaps, as many of the properties of matter, of force, and of mind as we are capable of using.

Each of the senses has its special function. They help each other, but each is confined to its own province. One sense gone, its special function is a blank in the experience of the person so lacking. But the other senses, each acting in its own sphere, may make up imperfectly for this want. Sight gone, and all qualities of matter that light gives are gone; color, form and feature, the ink printed page, beauty of pictures, of landscape, of the starry heavens, none of these can minister to the sightless person with their refining influence. Then, too, there is the difficulty, in these days of machinery, of following any profitable handicraft for a livelihood, so much depends

upon sight in the use of tools and machines.

The sight is the educational sense. The student uses it in all departments of his course from kindergarten to high school and college. The printed page, methods and processes, scientific instruments, all, in our courses of study are adapted to sight. Hence special methods and apparatus adapted to the blind must be devised and employed in our schools, to

meet their peculiar needs.

In all our methods and appliances we must remember that the blind can not see. A truism, you say; but do we seeing people fully take in the meaning of these commonplace words? Strangers to the blind do not always comprehend the physical fact, what are the possibilities of it, and what are the deprivations of the condition. To many, a blind child is a helpless curiosity, and they are surprised that any thing can be expected of such a person, and they wonder at the most commonplace things that the blind can do, and then fail to under-

stand the physical and mental deprivation under which the blind labor.

A blind man of my acquaintance was a guest at the home of a stranger. At retiring time his host showed him to the guest room, and, wishing to be very kind and thoughtful, taking him around the room said to him, here is the bed, here is a chair, here is the wash stand, and here is the looking glass. And those who have been familiar with the blind for many years may not fully take in the statement, the blind can not see.

The want of sight involves not only physical conditions, but also mental, moral, and spiritual energies. It influences muscle, nerve and brain. It may be a spur to mental and physical action, or more likely, it may have a depressing effect upon all energy. It may influence the sense of personal responsibility to self, to society, and to God. It will affect character for good or evil. And intelligence, independence, and character are essential elements of good citizenship.

Then too there are in some cases evil home influences and conditions which may be the cause of blindness, and the cause too of the most baleful influence of the affliction. If a blind child inherits bad habits and propensities, and also the disease that made him blind, he is doubly afflicted, and the problem of helping him out of his evil condition is a complicated one.

To make good citizens of the worthy and virtuous may not be so difficult, but to do this for the low and vicious may seem a hopeless task, when the inspiration of sight is lacking. Yet we are not to despair even of these. We must lay hold of the good in the heart, if we can find it, and by it raise the soul to a better and purer life. Our blind pupils are with each other in our schools only for a time; then they go out among the seeing with whom they are to spend their lives; hence we must prepare them for the world in which they are to live.

In educating our pupils for society and for the state we should have regard to three lines of training; physical, mental and moral; and these lines of education will act and react upon each other.

I will not go over the whole curriculum of our schools, but will touch only upon some special matters that are of importion. 10-7

tance in our work, in order to justify the claim that our schools

for the blind are educational institutions.

Physical training is necessary to the highest efficiency in all education for the seeing, much more for the blind. Blind children are apt to form habits of sitting, standing and moving that need correcting; and with many of them there is an indisposition to exertion, for lack of motive to overcome the difficulties incident to blindness. Hence they need special training to correct unsightly habits, and to arouse to activity.

Physical training will have two forms, manual training and gymnastics. Manual training has for its object instruction and practice in the use of tools. Gymnastics is concerned with correct posture and motion, with energetic exercise for

the development of muscle.

Physical training has to do with health and strength of body, with the efficient use of all its powers and their applica-

tion to useful purposes.

Physical training has also in it discipline of mind. It gives alertness and quickness to the power of attention. It trains the will to prompt action, and fosters the voluntary putting forth of effort, so necessary to any success in life. In short, physical training ought to have this ultimate result, the unifying of body and mind, with the body the efficient servant of the mind. This is especially needful for the blind; for sometimes it seems that their bodies and minds lack harmony of action, as though they did not belong to each other. Physical training for the blind is important because it tends to correct improper physical habits, and to arouse them from the inertia so characteristic of many blind persons.

Mental training is the main object of all education. We might say that education has three objects: first to know something, second to do something, third to have the disposition to do something; and that something may be physical, mental, or moral. The principles of education are the same for the blind as for the seeing, but the methods in some partic-

ulars are different.

Language training should receive special attention in the education of the blind. The power of expression is a source of pleasure and profit to the blind. The communication of

thought by speech takes the place in some measure of sight. If the educated blind man can not see the form and features of his friend, he can by exchanging thought in conversation enjoy the more interesting, inner life of his friend, and he calls this seeing his friend. Much of the enjoyment of life is in the intelligent conversation of congenial minds, and the blind are not

shut out from this means of happiness.

Then too there is the expression of thought in written language, and in public speech. Instruction in correct speaking and writing should be a specialty in our education. Equal in importance to the power of expression in good language is the ability to readily understand what is written or spoken, to gresp the spoken thought quickly and retain it permanently. The multiplication of text books in raised print of late years is a valuable addition to our means of education. the teacher of some work and add to his efficiency. But it would be a mistake to depend too much upon the raised printed page. Such is the expense of raised printing, that we find it difficult to keep up with the times in text books, and pupils will not get the best results if depending upon books alone. Also we grade scholars according to scholarship and not according to ability to read raised print; especially in the higher grades there will be a great difference in this respect. Hence oral instruction should have a prominent place in schools. Such teaching gives to the blind pupil the needed stimulus and training for acquiring knowledge. The enthusiastic teacher can impart his own enthusiasm to his class by the spoken description, by holding up before the students in all their meanings and bearings the principles and rules of the science which he is teaching. So much must be imparted by oral instruction in the literary department, in music, and in teaching handicraft, that it is of the utmost importance that pupils from the beginning and progressively be trained to seize at once upon the spoken thought. Much of the pleasure and profit in after life will come to pupils from being good Upon this ability will depend the pleasure and profit which they will derive from music, conversation, sermons, lectures, and speeches, in after life.

Usually the most influential citizens are those who can

talk and listen well in private and in public. Political influence consists very much in the exchange of thought between man and man. Good moral influence is exerted in the same way. Blind men and women are not deprived of this privilege of good citizenship by their affliction, provided they are prepared for it by training and intelligence. Every available means should be employed to secure the correct use of language and the ready and efficient attention to what is spoken. Oral reading, oral instruction in the class room for the power of attention; and topical recitation, written composition, and public speaking for the power of expression, all will be useful for the purpose proposed. While oral reading is very valuable for our pupils it should not be overdone. Too much inattentive listening will defeat the object which we have in view. It is well for the scholar to practice out of class the slower, more thoughtful reading of raised print books, of which we have now such a great variety. It has been suggested that in the schools we read too much orally and do not enough throw the pupils upon their own resources in reading for themselves. It may be so to some extent. Excessive reading to the pupils may dissipate the power of attention instead of increasing it. There is reason in all things. A just balance of means and methods will conduce to the highest efficiency.

With the study of the English language there should be with the advanced pupils the study of some other language; either Latin, from which so many of our words are derived, and the study of whose structure is such a valuable discipline, or some modern language, or both, if possible, as the German or French for their practical value, and for the training they give

in the thinking of other peoples.

All the studies of the school curriculum are as valuable for the blind as for the seeing, but each may have its peculiar adaptation to the blind. The study of geography, for it appeals to the blind child in his isolation and fixedness of place to lead him out into a comprehension of a larger place than his little, narrow, contracted world. The study of history is a pleasure to the bright, blind student. In this study he comes to realize that there are other people in the world besides himself and his immediate friends, an idea that does not always penetrate the mind of the blind child till he meets some of the rough knocks of life in school and out of school.

The study of the sciences by the blind presents some difficulties, inasmuch as the processes and apparatus appeal to the sight. Yet the relief models of physiology, working models of machinery, and machines themselves are tangible, and will give some valuable idea of the forces of nature as applied to machinery.

A former pupil of ours went to the St. Louis exposition. He said that on his first visit all was confusion to him. But a friend made for him a model of the grounds and the position of the buildings. Then the general effect of the exposition was clear to him. He could not fill in all the details, but so much of the great exhibition was a great pleasure. Now this man was prepared for this enjoyment by long experience and study, as a blind man, in school and out. He had trained himself to look outside of himself into the world around him. At one time he gave in our school a very acceptable lecture upon the subject of Birds.

The study of mathematics is a difficult one to the average blind student because so much depends upon mental operations, and so little help can be obtained from written calculations. Yet the science is valuable to the blind inasmuch as it leads them out from mere memorizing into independent thought.

Mental science, moral science, and logic, for the more advanced pupils will give opportunity for introspection, counteracted by the application of thought and mind to practical duty and obligation, and also to the orderly arrangement of mental processes leading to right conclusions from the conditions and circumstances which may enter into their experience.

I would be speak for our blind pupils as varied and extensive a training as time and ability will admit, that they may be prepared for emergencies that may come to them in after life. We never know to what use we may put our knowledge and ability till some necessity obliges us to exert ourselves according to what we know and can do. Scholars in our

schools ask the old, old question, Of what use will this study or that study be to me? To some it seems a waste of time and effort to pursue a study which has no immediate prospect of a money remuneration, forgetting that it is not altogether knowledge that is at a premium in the world. It is not primarily, How much do you know? but what can you do? Knowing and doing should go together, but knowing without doing has little market value in the world.

It is difficult to find remunerative employment for the blind; so few avenues are open to them, and we can teach so few handicrafts and professions in our institutions. But can not some of the blind, if trained to think and to reach out by effort into the world around them, find some special, unusual means of livelihood, and engage in some business or profession which we can not teach in our schools, but which their quickened apprehension finds adapted to their own special ability?

Music is the specialty of the blind. To it they look for a livelihood, either as teachers or performers, or to its allied industry, piano tuning and repairing. But the divine art should be considered more than a mere commercial commodity. One of the greatest deprivations of the blind is the lack of appreciation of beauty as it appeals to the eye. The beauty of form and feature, of painting and sculpture, of landscape with its ennobling grandeur of hills and valleys, of mountains which pierce the skies, of the broad expanse of plain and hill and dale as seen from some lofty peak, of the starry heavens, God's marvelous wonders, of the moon shining upon the glistening snow of winter—all these are lost to the person blind from birth.

Music is the fine art of the blind, the substitute for all that the eye can perceive of beauty; and as a substitute it ought to call out the more refined sentiments of the soul. This higher development of mind is specially needed by the blind to call them out of themselves into the more lofty realm of unselfish feeling and thought up to an enjoyment not found in the lower application of the art to mere commercial value.

We know that many will fail of this higher attainment, even though creditable performers upon instruments. But many, multitudes of seeing people, fail to perceive the beauty of art as it appeals to sight, fail of the uplifting power of painting and sculpture and architecture, and of the beauties of nature; no wonder then, if some of our musicians fail of receiving the full, refining, exalting influence of their art. Yet it is worth while always to train for the highest, even for the sake of the few that reach it. There is no loss in the expression of aspiration for the highest and noblest in thought and feeling and purpose. Music in its supreme result is the expression of the loftiest sentiments of the soul, and has in it the reaching up toward that which is heavenly and divine.

PROVISION FOR THE INSANE.

BY WILLIAM M. EDWARDS.

[William M. Edwards, medical superintendent of the Michigan asylum for the insane, is one of the most prominent alienists of Michigan, and by his research and the published results of his investigations has gained a fame throughout the nation among those who are interested in the care of the insane. He has made a special study of the history of the development of the modern asylum for the care of this class of defectives.]

In the earlier history of hospitals for the care of the insane in any state, conditions in many respects were materially different from what they became after a lapse of thirty, fifty or more years. In making provision for insane people it seems to have taken a long time for legislators and citizens generally to grasp the magnitude of the problem with which they had to deal. In Michigan the first attempt was the establishment of an asylum for the care of deaf and dumb, blind and insane, and well informed men seriously thought that one principal building would afford room for these classes for many years. Happily this triple alliance was dissolved before any insane persons were received, and a separate hospital for the care of that class established and completed ready for the reception of its first patient in 1859. When a second state hospital was proposed in 1876. violent opposition was encountered and even the chief executive of the state doubted the expediency and wisdom of establishing such an institution, giving as his chief reason that he did not believe there ever would be a sufficient number of persons in Michigan to make a second hospital at all necessary. In less than twenty five years from that time there were five state asylums. The newer states have perhaps profited by the mistakes made in the older ones, so that they have not repeated earlier blunders. In all newer asylums, particularly in the earlier histories of individual states, the character of the malady treated seems to have been different from that prevailing at present. A greater number of acute conditions were received. patients recovered from a first attack and insanity was commonly believed to be one of the most curable diseases until Dr. Pliny Earl, of Northampton, Mass., first showed the fallacy

104

of this idea in his book on the Curability of the Insane. There is to-day such a broadening in the application of the term insanity that it includes many people that a generation ago would not have been considered appropriate candidates for admission to hospitals of this kind. The very general abolition of mechanical restraint, the change of methods of care and treatment, the establishment of training classes and in a word. the hospitalization of asylums has begotten in the public mind a confidence in them that did not exist twenty five years ago. In any hospital of the ordinary type that has been established a quarter of a century or more we shall find to-day. besides a large accumulation of chronic insane, that the admission of old, feeble or paralyzed persons prevails to such a degree that less than 25 per cent of those entered in a given period may be considered curable. Formerly the recovery rate was greater than we are able to attain at present and such admissions account in part for this. Another factor causing this earlier excess was the recovery of periodical cases and their temporary departure only to return again sooner or later for further treatment.

The management and medical officers of our hospitals have been freely criticised in the past for not effecting a greater number of cures or for not doing more for the relief of patients. The neurologist has had many suggestions to offer us, the gynecologist has criticised freely and pronounced us derelict in duty because we did not remove the ovaries of our women patients. the surgeon would have had us trephine the skull of every epileptic or operate on him in some other manner. The faddist and quack are always ready with some suggestion of a cureall and even the layman thinks he can see many opportunities for improvement in the care and treatment of the insane. telligent criticism and suggestion are most gladly welcomed, but fault finding per se, advocacy of change and mere theories. without suggestion as to improvement, avail but little in solving the very important question involved in caring for defective or dependent people. I am sure that I can say, without fear of successful challenge, that no class of public workers are more earnestly and intelligently interested in obtaining that which shall benefit their charges than are those administering our hospitals for the insane throughout the country. This is well illustrated in the constant effort made by boards of control and superintendents to improve the conditions under which the insane live and to afford every possible means for treatment with a view to their restoration to normal conditions or to such improvement as shall render them to a degree at least useful members of society or to place them in condition to obtain the

greatest comfort in life while residents of the asylums.

We long since determined that the reception and care of acute cases in the general ward of the asylum, given over to its more or less chronic inhabitants, was wrong in principle and detrimental to the interests of the curable case. The ideal surrounding for an acute case would probably be exclusive association with normal minds, but this condition is unattainable for the insane person supported at public expense. One of the efforts to meet the requirements of acute cases was to establish separate asylums for the acute and chronic insane. The state of New York made such provision for the separation of cases by special asylums, but long since this theory was abandoned. Pennsylvania maintains one institution for chronic cases, but so far as I am able to learn, this is merely an asylum for the able-bodied working class, the frail, feeble, chronic patients having no part in it. Wisconsin has perhaps accomplished more effectively separation by the establishment of its hospitals at Mendota and Winnebago for the recent patients and the care of its more permanent cases in the several county institutions. Even here acute cases find their way into the county asylums, and as the theory upon which they are founded is custodial care these cases are deprived of the care, attention, nursing and medical treatment that their condition demands they should receive. In one state an effort was once made to establish the medical condition of the patient by legal enactment, and it was declared that at the end of two years of asylum treatment patients were to be considered chronic and incurable and were to be transferred to special places provided for their cheaper care. In Indiana, congestion in state hospitals is relieved from time to time by returning to the county poorhouses from the oldest state asylum patients who are supposed to be incurable and to require only custodial care. That these cases degenerate in the county institutions without medical oversight and their condition becomes deplorable in a short time, has not yet impressed itself so forcibly upon the minds of the citizens of that state as to make a change in method.

In no instance do I think we have attained perfection in our care of the insane. I hope that we never shall so feel, for as soon as we come to that conclusion, decay of the worst kind will supervene. In the administration of this great charity, as in any other undertaking, we can not stand still. We must either progress or we will retrograde; and if the latter condition obtains, retrogression will be rapid. In the care of insane in state hospitals at public expense there always must be a compromise between the patient and the taxpayer. The aggregate cost in any given state of maintaining patients is very great, so that constantly we are constrained to exercise great economy. Like the politician we can not always obtain what we desire and must be content with what we can get. That the burden of caring for the insane weighs heavily finds ex-

pression in the many attempts to lighten it.

The public, however, is becoming more and more alive to the conditions surrounding the insane and the quality of care afforded them. A man eminent in their care once estimated that only two per cent of our population is interested in asy-This two per cent includes primarily the relatives and friends of the patients; secondarily, the members of the boards of control, officers and employes of the institutions, philanthropists and perhaps a few others. The relatives of an insane person are acutely alive only to the interests of their own friend. This we see manifested in the very often expressed wish that a patient when brought to the hospital be placed in special surroundings, that he must not be put with insane people, because he is only a little depressed or disturbed, that he must be kept away from those whose behavior is of a distressing or revolting character. In other words, whatever the provision made by the state, the individual when the question is brought home to him demands a special arrangement for his friend. We all recognize the undesirability of placing the acute, depressed, hypersensitive or apprehensive patient in a

large ward for the treatment of general cases, bringing him into contact with a body of insane people for perhaps the first time. We have sought to create different conditions under which such cases shall be received and treated. Within a few years past there has been a strong tendency to break away from old methods and ideals and to establish new conditions for the reception and first care of the recent, presumably curable or borderland cases. Germany has been to a very large extent the pioneer in this work. We owe not a little to German investigators, prominent among whom are Kraepelin, Wernicke and Ziehen, for their studies of mental diseases and the practical ideas they have suggested. The teaching of psychiatry in the medical schools of Germany seems far ahead of that in the United States. a number of German cities wards in general hospitals are set apart for psychiatric purposes, but serve largely only as detention pavilions. From such wards clinical material is taken to illustrate medical lectures. There are to-day eight psychopathic hospitals in Germany. They are located at Heidelberg, Strassburg, Leipsic, Halle, Freiburg, Wurtzburg, Giessen and Kiel. At Heidelberg most of Kraepelin's work has been done. Here is a small hospital having beds for only twenty five cases. Patients are voluntarily committed to the psychopathic hospitals or remanded by city magistrate pending examination. A formal insanity certificate is only executed in transferring cases from these hospitals to large state asylums. One of the earliest attempts in this country to care for the insane outside of the general asylums was at Albany, New York, where a ward was connected with the general city hospital for the reception of such cases. Into this ward were taken psychopaths and neuropaths, borderland cases, the acute conditions of the least pronounced type; and many of them recovered without the necessity of being formally adjudged insane. Notwithstanding the advances that have been made in psychiatry we can not deny that the friends of the patients shrink from the notoriety of having a relative adjudged insane and committed to a hospital. So jealous are we of our constitutional right that no person shall be deprived of his liberty except by due process of law, that adjudication of insanity is still necessary in the great majority of cases. There are, however, a considerable number

of borderland conditions, earlier manifestations and lighter forms of mental disease that may be admitted to psychopathic or other hospitals for treatment without the ordinary inquirendo de lunatico. Referring later to the subject of psychopathic or special hospitals, we now may well ask what may constitute an ideal state hospital for the care of the insane?

In framing an answer to the question there are a number of points that we shall all hold in common. Undoubtedly there will be others upon which each will have his own idea or theory and these may be somewhat at variance. I think we may fairly assume that we all agree upon the necessity for some sort of special provision for the separation of the acute from the chronic cases in every asylum that has five hundred or more patients. Of the various hospitals for the care of insane that I have visited, some stand out more prominently as being worthy of imitation than others. Among those that have especially appealed to me were the institutions at Woodilee and Gartloch, a few miles outside the city of Glasgow, Scotland, and serving the parish of Glasgow, with its approximately million inhabitants. The older one, at Woodilee, having something more than nine hundred patients, comprises a central or administration building with wings on either side and some detached buildings. These latter are especially worthy of note. One is a reception house which has been in use now a little more than two years. It is entirely separated from all other asylum buildings and into it since it was opened every newly admitted case, without exception, has been received. It consists of two roomy wards and six bedrooms and can accommodate twenty patients, ten of each sex. The two wings are divided by the kitchen, nurses' quarters and the serving department. The arrangement is devoid of any asylum features, being identical in all respects with those of a small hospital. The patients' quarters are one story only; there are no means of secluding patients; all the windows open on verandas or to the ground and can easily be used as a means of egress. The doors are not locked. The entire nursing force is women, under the charge of a specially trained nurse. Every patient on admission is treated in this house and the length of residence depends on the mental condition. It was feared by Dr. Hamilton Marr, the superintendent, that there would be some difficulty in retaining the services of good nurses to care for men patients. This is what he said some time ago on the subject:

"Hitherto, these fears have been groundless and in all one hundred and seventy two patients of both sexes have been admitted since the opening. The nurses in the reception house possess all the qualifications for good nursing and have every opportunity of exercising these qualifications. When a vacancy occurs in the nursing staff, which is rare, there is not a nurse in the asylum but is desirous of filling the post and my experience in this respect extends to the most sensitive and refined of the nurses. One or two nurses, if necessary, have the special duty of nursing any unusually excited or restless These nurses are relieved in a short time by others if their work is unduly arduous. A serious objection that has been urged in connection with the nursing of newly admitted men patients by women is the frequent occurrence in insanity of sexual aberration, often of a shocking kind and the use of profane language or worse. That such cases may come under observation I am fully alive to. That such cases have not arisen may, I think, reasonably be attributed to the new conditions under which the patients are placed. The quietness. cleanliness and general appearance of a small ward differing in no respect from a medical ward in a general hospital and the refining influence of women nurses have, I have no hesitation in stating, a restraining influence on the insane tendencies in the patients who are not absolutely delirious."

At the Woodilee asylum, besides this building for acute cases is a sanitarium for tubercular cases, opened on Christmas day, 1902. A large nurses' home completed late in 1903 has accommodations for 110 nurses. A large well planned laboratory building, detached from other buildings, was under process of construction. Fourteen houses for married attendants and artisans were being built by contract when I visited this asylum. When completed there will be forty seven houses on

this asylum estate available for employes.

The sister institution, the Gartlock asylum, received its first patient on the 8th of December, 1896. It was built for 570 patients on an estate of 344 acres and had cost, four years

after it was opened, when it was finished in nearly every detail, inside and out, approximately two thousand dollars for each bed. This institution is designed as two separate departments, a hospital and an asylum. The hospital receives all the new cases and in its wards are also treated the acute bodily sick and the old and infirm cases. As patients are seen not to require special observation or treatment they are sent to the asylum wards and many cases of short duration are discharged after hospital treatment only. Among the features is the arrangement for the admission of patients. At the entrance of the hospital building are suites of reception rooms for each sex. First a small room furnished as a medical consulting room where each patient on his arrival is received by a medical officer and where every convenience is provided for taking notes of such information as can be furnished by those who accompany the patient as to the nature and history of the case. After the interview with the medical officer the patient is taken into an adjoining room to be bathed, and makes the acquaintance of the nurses and attendants before seeing any of the other patients or anything especially of an asylum character. After the bath the patient then goes to the next which is a bed room, is put comfortably to bed and is given a careful examination by the medical officer who gives such directions as to the future treatment as seems most desirable. This arrangement has a double object in that it gives opportunity to the medical officer to make a complete examination of each patient immediately after his arrival and it also impresses upon the patient from the first a feeling that he will be kindly and skillfully treated; and it avoids the unfavorable impressions made by the entrance at once into a large ward. Consideration shown to the patient in this first stage has its desirable effect upon the minds of the nurses and attendants and helps to give a desirable tone at all times to their mode of dealing with patients. Women are employed as nurses in the wards for sick men. Each ward is during the day under the charge of a specially trained nurse and three women attendants, and the care of the sick men is thus assimilated to that of a general hospital. The presence of these nurses has a good and humanizing influence. the care of the patients is more efficient and the wards are

kept with greater neatness and taste.

The Michigan asylum for the insane located at Kalamazoo is the oldest state institution of its kind in Michigan. It has 1,640 patients. Its original building, having 720 feet front, was constructed on the corridor type. When in 1870 an enlargement became necessary, representatives of other communities desiring a state institution for their own towns succeeded in having a provision attached to the bill appropriating money for this extension, that none of it should be expended for the construction of any building within forty rods of the then existing asylum building. To comply with this, forty rods were measured and a second large building of 540 feet front was erected, which has since that date formed the main department for men. In 1885-86 a further extension of asylum accomodations at Kalamazoo was made in departing from the previously recognized type of construction by the establishment of two colonies. The first colony comprises a farm of 276 acres located two and one half miles from the parent institution. It was soon converted into a milk farm, a very large dairy barn was constructed, and one house erected having accommodations for 47 men patients. No additional houses have been built at this place, known as the Brook farm. The second colony, established in 1886, is located three miles in an opposite direction from the Brook farm, and has always been designated as the colony. Here are four large brick houses having room for 263 patients. One of these houses is occupied by men and three by women, and in addition there is a physician's residence and barns, stables, pig-pens, chicken houses and all necessary outbuildings that are ordinarily found upon a farm of 357 acres. In the administration of the asylum the chronic, quiet working class of patients who can be entrusted with a considerable degree of liberty are transferred to colonies. There is no difficulty in finding sufficient occupation for men in ordinary farm and garden work and in the dairy. Women are engaged in various household duties. Under the direction of a cook at each cottage they prepare their own meals, do their laundry work, and in fact are employed much as they would be in their own homes. When this colony reached its

present capacity the question of transportation became an important one in its administration. Supplies and passengers are now carried back and forth by team. For some time past it has been the intent to establish connection between this colony and the parent institution by means of an electric railway. Appropriation has not yet been made for this and hence the colony has not been enlarged. It may be mentioned that for twelve years the milk from the Brook farm has been delivered twice each day to the original asylum with a team driven by patients. One man has done most of this work. His routine has been broken into on one occasion by a week's visit to the Pan-American exposition and again by a similar outing to the exposition at St. Louis. It will thus be seen that the chronic, able-bodied patients at the Michigan asylum are to a considerable extent cared for in colonies.

In 1898 was opened a hospital for acute cases among women. It has accommodations for 52 patients. The general principle upon which it is arranged, furnished and managed is that of a small sanitarium. Into this building is taken nearly every woman that is admitted to the institution. The only exceptions are pronounced epileptic insanities and some of the extreme senile and post-hemiplegic cases. Every facility is provided for the scientific care and treatment of cases. Patients are placed in bed and strongly impressed with the idea that they have entered a hospital, that they are sick, and the object to be attained is their recovery. Each woman is put to bed in a room by herself, is given the attention of one or more nurses, if required, by both day and night. The object of placing patients in bed is primarily to impress upon them the fact that they have come to a hospital for treatment, that they are sick or distressed in mind or body or both and are in need of care and attention. The influence of this special hospitalization has a marked effect for good upon the nurses. Patients are kept in bed so long as their condition seems to require. Depending upon their physical and mental condition, they may be allowed within a few days or a week to be up and dressed, about the wards or out of doors. Many patients, however, are kept in bed for several weeks. If this is the case after the expiration of two or three weeks, systematic massage is Vol. 10-8

applied to take the place of more active physical exercises in those who are frail physically. The patients who can do so are allowed to be up a part of each day and are given exercise in the open air whenever the weather will permit. Provision is made for the special treatment of those diseases incident to women alone and for surgical interference in all cases where it seems to be required. Surgical operations are not done to cure insanity but to relieve conditions of the female generative apparatus that may be sources of annoyance, irritation or distress to the patient, and such conditions as would be relieved by an operation in the surgical division of an ordinary hospital for women who are not insane. The use of water in various forms is largely employed to tranquilize excited conditions, secure rest and sleep, as it is found by experience that this is in many cases equally or more effective than drugs and certainly less objectionable in its after effects. The wet sheet pack, properly applied under the supervision of a physician and in the hands of a skilled nurse, is useful in restraining restless, uneasy patients who might otherwise exhaust themselves. Electricity is employed to a considerable extent, the static form having preference. In some cases it undoubtedly does good and in others it is valuable as a means of suggestion. Food is prepared in a special diet kitchen, and there is not the slightest restraint upon the physician in charge in the matter of supplying any article of diet prepared in any way that in his judgment may contribute to the comfort or welfare of his patients. The hospitals are used by the physicans and superintendent of nurses as placed for demonstration to the members of the training school of the methods of care and treatment of cases. Many patients recover after a residence in the hospital building only, and go home without having resided at all upon a general ward of the institution. Others, as their cases are shown to be of the chronic or incurable type, are transferred to the wards or colony and placed among patients whose conditions are similar to their own. At rare intervals, a periodical case of the maniacal type becomes so violent and noisy at this hospital building that she is transferred to a ward intended in the original construction of the institution for the care of this type.

The hospital, without any effort to produce such a sentiment, has achieved a pleasant reputation. In the preliminary arrangements for the admission of patients or when they are brought to us, it is almost always requested by their friends or by them that they be admitted to the hospital and not to the asylum. The law of Michigan permits voluntary admissions of those who are nervous and in need of hospital care, but not actually insane, and specifies that such patients shall be admitted to the hospital. Treatment of cases in the hospital tends much to dispel the feeling of dread about entering an asylum, and has accomplished not a little in placing mental diseases where they belong, that is, on the same footing as any

other malady with which humanity may be afflicted.

A similar building is now being finished for the care of men patients. This building has room for 77 patients and residence for 20 nurses, which will be about the number required for their care. In several features it is a distinct improvement upon the construction of the hospital for women. There is one room which will accommodate 12 of the more depressed or suicidal cases where they shall be under the constant supervision day and night of a competent nurse. There are rooms for hydriatic treatment and various baths including electric light bath; a room for massage and electrical treatment, laboratory rooms for such examinations and experimentations as are required. Altogether, it is expected that this building will meet the same needs among the men that the hospital for women has met, and be equally popular among the friends of the men patients.

The idea of caring for the insane exemplified at the Michigan asylum for the insane at Kalamazoo may be briefly de-

scribed as comprising three factors:

First; hospitals for acute cases, which have been described. Second; the asylum for the frail and feeble, the restless, uneasy and disturbed chronic cases.

Third; colonies for able bodied chronic workers.

Second; the asylum proper. The asylum proper is the residence of those who are frail and feeble physically or by reason of bodily sickness are confined to bed, and of the more restless, uneasy or disturbed chronic cases. Those who are

unsuited for treatment in the hospitals for the acute may be transferred as occasion arises to the asylum proper, and from it to the colony, as they may seem to be adapted for such residence. Many patients of the periodical types, as manic-depressive insanity in the intervals between the more active manifestations of the disease, may reside at the colony with comfort and pleasure to themselves and profit to the institution. Indications of a returning attack of disturbance will enable them to be retransferred to the asylum. Chronic cases requiring surgical care can be taken into the hospitals for the acute and given such attention as may be required, and then

returned to the asylum proper or colony, as indicated.

Third, colonies: A colony located upon a farm affords a healthy, economic means of providing for the more robust, chronic insane who are able to do some work. Such patients live under more natural surroundings and are allowed a greater degree of liberty than can be given many times in a parent institution. By becoming interested in farm operations, a disposition to elope from the asylum is often entirely nullified. The insane individual usually does best that which he has previously known how to do best. Patients drawn from an agricultural community find on the farm, in the gardens and barns, healthy and congenial occupation of the kind to which they have been accustomed. The colony should be located with reference to accessibility, ease of transportation between it and the parent institution, with a view to a water supply and the disposal of sewage. The latter, however, can be taken care of by methods of distribution upon the land.

Colony houses should be constructed substantially of brick, and may accommodate according to the taste and ideas of the builders, from 20 to 75 patients each. They should have large, airy dining rooms with a reasonable proportion of day room space, and patients may sleep very largely in associated rooms or dormitories. They should be lighted by electricity and warmed by indirect radiation, using low pressure steam boilers. In colony houses for men, rooms in the basement or elsewhere must be set apart as smoking rooms, where the men, after their day's work, may congregate and enjoy games and indulge in the use of tobacco. For both men and women

shower baths are preferred to tubs for all ordinary purposes. From time to time convalescent patients are transferred to the colony for a short residence before being discharged. This serves a double purpose of giving such cases an opportunity to demonstrate their ability to live under surroundings more nearly approximating home life. The discharge to their homes from time to time of patients from the colonies removes from the minds of those remaining, a feeling that a transfer to these houses means a permanent stay in the institution. The sentiment "abandon hope all ye who enter here" must not be writ over the entrance to any portion of the modern institution for the insane.

The legislature of Michigan has established in connection with the medical school at the University of Michigan, at Ann Arbor, a psychopathic hospital having forty beds, for the care and treatment of mental and nervous cases. This hospital is erected in conjunction with the other university hospitals, and though not yet furnished nor opened, it is expected that at an early date it will be ready to receive cases from various parts of Michigan. Patients are admitted to it upon certificates of attending physicians. They may be transferred from the psychopathic hospital to the asylum of the district of which they are residents, and those under treatment in the state asylums may, if a reason arises for so doing, be sent to the psychopathic hospital for observation and treatment. It is expected to give much attention to the study of the various conditions arising in the patients who are admitted to this psychopathic hospital. Negotiations are under way to place it under the immediate care of one of the leading psychiatrists in America. It will serve not only as a place for the care and cure of psychopaths and neuropaths, but will afford most admirable facilities for the study of nervous and mental conditions by medical students, an opportunity for doing which has been sadly lacking in our American medical schools.

The arrangement outlined meets many of the requirements for a modern asylum. The small hospitals for recent cases enable such to receive special attention without coming into contact with distressing or disturbing factors inseparably connected with residence among chronic cases. The asylum

proper takes care of the demented, untidy and more disturbed permanent residents and of the physically frail and weak. The colony provides room at a minimum cost and healthy and remunerative employment for able bodied chronic or convalescent cases. While these factors are separate, they are interdependent and patients can readily be transferred from one component part to another. The whole can be readily under a head for administrative purposes, and no extra financial or commissary offices are required. The size to which such an institution can profitably grow, depends upon the executive ability of its superintendent.

IMMIGRATION AND THE PUBLIC HEALTH.

BY ALLAN McLAUGHLIN.

[Allan McLaughlin, surgeon, has made an exhaustive study of the relation of immigration to the public health, and for the purpose of his research has made thorough investigations into the diseases of immigrants, and their spread in the congested districts of the great cities. His work along this line has attracted wide attention among the medical profession, public officials and charity workers.]

Copyright 1904 by D. Appleton & Company

The popular belief that immigration constitutes a menace to the public health is not without foundation. Newspapers and magazines contain graphic accounts of the squalor and insanitary conditions of the tenement districts of our great cities. Recent newspaper reports and comments upon the remarkable spread of trachoma in the public schools of New York and other great cities add to the popular feeling of distrust, and the opinion is gaining ground everywhere that more stringent means must be devised for keeping out the undesirable class of immigrants which augments the frightfully overcrowded population of the tenement district of New York and other large cities.

In the consideration of danger to the public health from immigration, three factors must be taken into account: (1) The physique of the immigrant; (2) his destination, and (3)

the presence or absence of communicable disease.

The first mentioned, the physique of the immigrant, is by far the most important factor. Good physique was much more general among immigrants a quarter of a century ago than among the immigrants of to-day. The bulk of the immigrants previous to 1880 came from the sturdy races of northern and western Europe, and not only was good physique the rule, but loathsome, communicable or contagious disease was extremely rare. The immigration from Ireland, Germany and the Scandinavian countries is insignificant to-day compared with the thousands of Slavs, Italians, Hebrews and other immigrants from southern or eastern Europe, which now crowd American-bound vessels and pour through the ports of this country in an ever increasing stream.

With the change in the racial character of immigration. most marked in the past decade, a pronounced deterioration in the general physique of the immigrants, and a much higher per cent of loathsome and dangerous disease is noticeable. Thousands of immigrants of poor physique are recorded as such by the medical inspectors at Ellis island, and a card to this effect sent to the registry clerk or immigrant inspector with the immigrant; but this mere note of physical defect carries little significance under the present law, and the vast majority of them are admitted by the immigration authorities, because it does not appear that the physical defect noted will make the immigrant a public charge. When the physical defect or poor physique is so marked that it seems to the medical inspector likely to make the immigrant a public charge, the immigrant is detained, and a certificate is made stating his disability, which certificate goes to the board of special inquiry with the detained immigrant. About two thirds of the immigrants so certified as likely to become a public charge are admitted because of the latitude allowed by the phrase, "likely to become a public charge." Under the present law, therefore, the immigrant certified as suffering from a loathsome or dangerous contagious disease, or as being idiotic or insane, is deported. The immigrant recorded as having a poor physique or other physical defect is usually admitted.

Race.	Ratio Sent to Hospital on Arrival to Total Number Landed.	Ratio Deported on Medical Certificate to Total Number Landed.	Percentage Remaining in New York.
Hebrew Italian Slav Irish Scandinavian	1 to 177	1 to 393 1 to 535 1 to 575 1 to 1450 1 to 3280	70 per cent. 50 " 15 " 33 " 18 "

Destination is scarcely less important than physique, and it is the rule that aliens of a race having a low physical standard will invariably herd together in the overcrowded insanitary tenement districts of our great cities, while the sturdy race of unskilled laborers are scattered over a wide territory, and tend to establish little homes of their own in the country or in the suburbs of manufacturing towns or cities.

The foregoing table indicates the relative physical strength

of the various races under discussion, and also the percentage of each race giving New York as their destination. Statistics of the Irish and Scandinavian races are given in this table for

the purpose of comparison.

The third factor to be considered is the presence of communicable disease among immigrants. The ordinary quarantinable diseases are eliminated from the question by efficient quarantine methods, but certain communicable maladies, classed as loathsome or dangerous contagious diseases, exist among immigrants, and constant vigilance and considerable skill are necessary on the part of medical inspectors of immigrants to detect these cases and separate them from the healthy immigrants.

The most important of these diseases, because of its frequency, is trachoma. Of the total number of cases of loath-some or dangerous contagious disease found in immigrants, 87 per cent are due to trachoma and 10 per cent to favus.

Several years ago the prevalence of trachoma in the poorer districts of our large cities, and particularly among the foreign born population, caused numerous requests from medical men engaged in eye work in various parts of the United States that trachoma be placed in the list of excluded affections. This was done in 1897, with the result that a great many suffering with the disease were taken from among the steerage immigrants and deported. It was then discovered that ordinary steerage aliens suffering from trachoma were being transferred to the cabin, while en route, or after being refused passage in the steerage at the port of departure, would be sold a cabin passage, with the assurance that cabin passengers were not inspected at the port of arrival. To check this practice and to make the inspection of aliens complete, an inspection of cabin passengers was instituted in the fall of 1898. inspection has been very successful in preventing evasion of the law, but many steamship companies were still apparently careless of the diseased condition of immigrants to whom they sold tickets. By the last immigration law (1903) a penalty of \$100 is imposed upon the steamship company for each diseased alien brought to our ports, provided the disease evidently existed at the time of the immigrant's taking passage, and

could have been detected by ordinary medical skill. This penalty has had a salutary effect in causing the steamship companies to institute a more rigid medical inspection at the European ports of departure. Formerly the presence of a diseased alien in the steerage was a matter of more or less indifference to the steamship companies, as they could carry him back to Europe, if deported, and still make a profit on the price of his original passage.

Two points about trachoma have occasioned considerable discussion. These are its contagiousness and its likelihood of causing permanent injury to sight. The contagiousness of trachoma is recognized and conceded by those who have seen a sufficient number of cases of the disease to form an accurate impression. Striking examples of its contagious character can be seen any day on Ellis island. The annual conference of state and provincial boards of health, held at New Haven, October, 1902, placed trachoma in the category of diseases communicable and dangerous to the public health.

Permanent injury to sight is most likely to occur in cases where early treatment is neglected. Among immigrants with trachoma, ignorance of personal hygiene and inability to secure proper treatment make the spread of this disease alarming and the consequences to sight disastrous.

The area in Europe where trachoma is most prevalent extends from the gulf of Finland on the north to the Black sea and the Mediterranean on the south, and from Moscow and the Volga on the east to the Carpathian mountains on the west. In addition, it is prevalent in Greece and southern Italy, probably because of commercial intercourse with Syria, Egypt and the Barbary states. The first mentioned area is occupied by Finns, Lithuanians, Russians, Poles, Russian Germans and Hebrews. The statement is made in some text books that trachoma is prevalent among the Irish. Observation of immigrants shows that this statement is not true. There is less trachoma among the Irish than any other race of immigrants. The following table indicates the ratio in which this disease was found among the immigrants landed in in 1902.

Race.	Ratio of Cases of Trachoma to Number Immigrants Landed	
Syrian	1 to 69	
Armenian	1 to 192	
Lithuanian	1 to 375	
Finn.	1 to 496	
Hebrew	1 to 539	
Greek	1 to 667	
Slav	1 to 758	
German	1 to 772	
Scotch	1 to 1,216	
Magyar	1 to 1,243	
Italians	1 to 2,066	
Scandinavians	1 to 3,486	
English	1 to 3,623	
Irish	1 to 4.173	

Favus has for several years been included in the list of excluded diseases. If the disease has existed for any length of time, it is, of course, easily detected by the loss of hair and changed character of the individual hairs and the scalp; but in cases of recent origin detection is often difficult because of shrewd efforts at concealment. The immigrants are often prepared for inspection, the tell-tale yellow crusts carefully removed and the scalp cleansed.

Tuberculosis of the lungs is rarely found among immigrants on arrival. Thousands of immigrants are examined whose poor physique suggests to the medical examiner the possible existence of tuberculosis, but out of the many thousands thus examined at Ellis island last year, only fifteen cases were certified as suffering from tuberculosis of the lungs.

This apparent freedom from tuberculosis is partly explained by the fact that tubercular diseases are notoriously diseases of the cities, while the bulk of our immigration comes from the agricultural communities and small towns. The remarkable prevalence of tuberculosis among recently landed immigrants is the effect of horrible over crowding in infected, filthy tenements by immigrants whose poor physique makes them ready prey for communicable disease. In addition to the horrible congestion of the tenements, the insufficient food and insufficient fuel and clothing, especially among immigrants from Mediterranean countries, must be considered as factors in the development of tuberculosis.

The danger to the public health from immigrants suffering from communicable disease is at present comparatively slight.

The United States public health and marine hospital service is charged by law with the medical inspection of all incoming aliens at ports of the United States. Officers of the service receive special training for their work as medical inspectors of immigrants. Ellis island, New York, is used by the service as a great school of instruction where young officers, before being detailed for immigration duty at one of the other ports of entry, are trained in the detection of the particular diseases and defects likely to be found in immigrants. Canada has always been a favorite route for undesirable immigrants wishing to evade the law, and officers of the public health and marine hospital service are stationed for immigration duty at Quebec and other Canadian ports, and at various points upon the Canadian frontier. Certain steamship lines make a regular business of carrying to Canada, for subsequent entry to the United States, aliens who have been rejected and sent back from an American port, or who manifestly belong to the excluded classes, or who have been rejected by other steamship lines who have some regard for our laws.

The officers of the public health and marine hospital service stationed at Quebec, Halifax, N. S., and St. Johns, N. B., have authority to examine only those aliens manifested as destined for the United States through Canada. Immigrants so manifested do not differ materially from immigrants ordinarily received at United States ports, and are given certificates of physical fitness which admit them to the United States through any of the border points. Thousands of immigrants evade this inspection at Quebec, Halifax, or St. Johns by being falsely manifested as destined finally to Canada. They have no certificates of inspection by United States officers at Quebec, Halifax or St. Johns, and upon attempting to cross the border

are sent back to Montreal for examination.

In order to show the quality of the immigration brought by the Beaver line and other lines engaged in this nefarious business, it is only necessary to state that 50 per cent of the immigrants attempting to cross the border in 1902 were rejected, whereas the usual percentage of rejection at United States ports is only one per cent.

A regularly organized system of smuggling diseased im-

migrants across the border has been exposed by the United States immigration authorities at Montreal; and although the border inspection maintained by the United States immigration service is doing splendid work, it is impossible to guard effectively every point of over 3,000 miles of frontier. A more perfect system of exclusion is now possible, and consists of a rigid inspection of all aliens landing at Canadian ports under an effective Canadian law similar in character to our own,

which has recently been enacted.

The real danger to the public health from immigration lies in that class of immigrants whose physique is much below American standards, whose employment is in the sweat shop, and whose residence is the east side tenement in New York city. The Mediterranean races, Syrians, Greeks and southern Italians, who are unused to a cold climate, and who often have insufficient clothing, also establish in their crowded quarters splendid foci for the dissemination of disease. The Hebrews, Syrians, Greeks and southern Italians, invariably crowd the most insanitary quarters of the great centers of population. And the various filthy and infected, though perhaps picturesque, foreign quarters constitute to-day the greatest existing menace to the public health.

There are many view points from which our immigrant problem may be judged. There are extremists who advocate the impossible—the complete exclusion of all immigrants, or the complete exclusion of certain races. There are other extremists who pose as humanitarians and philanthropists and who advocate an act of lunacy—removing all restrictions and admitting all the unfortunate—the lame, the halt, the blind and the morally and physically diseased—without let or hindrance. Neither of these extreme positions is tenable. The debarring of all immigrants, or the unjust discrimination against any particular race, is illogical, bigoted and un-American. On the other hand, the indiscriminate admission of a horde of diseased, defective and destitute immigrants would be a crime against the body politic which could not be justified by false pretense of humanity or a mistaken spirit of philanthropy.

The sane, logical position must fall between these two extremes. It is necessary for us to restrict and debar, if pos-

sible, all undesirable immigrants. A jealous regard for the public weal may demand measures and standards which seem to the humanitarian and philanthropist selfish and inhuman; but charity begins at home, and it is the right of Americans to exclude the undesirable and to employ whatever measures and set whatever standards may seem necessary to exclude any class which menaces the social or physical welfare of the country.

If we debar any undesirable class of immigrants under the law, we should endeavor to make the law as nearly perfect as possible and debar all undesirable classes. We debar the immigrant with trachoma, syphilis, leprosy or favus; also the insane, the epileptic and the idiotic, but we admit the immigrant with poor physique, unless it is so marked as to make

him undeniably a public charge.

There should be but one standard of physique for the immigrant, no matter whether his destination be the Pennsylvania mines or the New York sweat shops. The skilled laborer should be expected to possess the same rugged physique as is now expected of the unskilled laborer. The standard should be fixed by law by comparison with other well recognized standards of physique, and should be sufficiently high to exclude all who could not beyond doubt make a living at hard manual labor. The wording of the law should be definite enough to make the medical certificate of poor physique equivalent to deportation.

This requirement of a definite physical standard in immigrants could be exacted without undue hardship of all unmarried male immigrants within certain age limits, for instance eighteen to forty five. In regard to families, comprising women, children and old men, in addition to males between the ages of eighteen and forty-five, each family should be required to have at least one member constituting its chief support who could comply with the physical requirements of the law. The law need not apply to parents coming here to join their children, provided the children had established a home here and presented evidence of ability to care properly for their parents.

If the thousands of recruits for the sweat shop army which

arrive each year could be thus checked for ten years, the present existing tenement house problem would solve itself. The terrible congestion of the tenements would be relieved; the scale of wages for the sweat shop worker would be elevated, and the general sanitary conditions of life in such districts as the lower east side, New York city, could be improved sufficiently to reduce the menace to the public health from this cause to a minimum.

CITY LIFE, CRIME AND POVERTY.

BY JOHN R. COMMONS.

[John Rogers Commons, economist; born Darke county, O., October 13, 1862; graduated from Oberlin, 1888; A. M., 1890; student Johns Hopkins, 1888–90; professor sociology Oberlin college, 1892; Indiana university, 1893–95; Syracuse university, 1895–99; expert agent Industrial commission, 1902; assistant secretary National Civic Federation, 1903; professor of sociology, University of Wisconsin. Author: The Distribution of Wealth; Social Reform and the Church; Proportional Representation, etc.]

Statistics are considered by many people as dry and uninteresting, and the fact that a book or article is statistical is a warning that it should not be read, or that the statistical paragraphs should be passed over for the narrative and historical parts. This is a dilettante and lazy attitude to take, and especially so in the study of social subjects, for in these subjects it is only statistics that tell us the true proportions and relative importance of our facts. The study of statistics leads us to a study of social causes and forces; and when we see that in the year 1790 three per cent of our population lived in cities, and in the year 1900 thirty three per cent lived in cities of 8,000 population and over, we are aroused to the importance of making a serious inquiry into the reasons for this growth of cities and the effects of city life on the future of democracy and the welfare of the nation. More impressive to the student of race problems becomes the inquiry when we realize that while one fifth of our entire population lives in the thirty eight cities of 100,000 population and over, two fifths of our foreign born population, one third of our native offspring of foreign parents, and only one tenth of our people of native parentage live in such cities. That is to say, the tendency of the foreign born towards great cities is four times as great, and the tendency of the children of foreign parents is three and one third times as great, as that of the colonial and older native stock.

If we present the matter in another form in order to show the full extent of foreign influence in our great cities, we find that 59 per cent of the population outside, and only 30 per cent of the population within, these cities is of native parentage, while 27 per cent of the population outside, and 65 per

cent of the population within, these cities is of foreign paren-The census enumeration carries us back only to the parents; but if we had knowledge of the grandparents we should probably find that the immigrant element of the nineteenth century contributed a goodly portion of those set down as of native parentage.

Still more significant becomes the comparison when we

take each of these cities separately.

Here it appears that the extreme is reached in the textile manufacturing city of Fall River, where but 14 per cent of the population is of native extraction, while in the two greatest cities, New York and Chicago, the proportion is 21 per cent, and the only large cities with a predominance of the native element are St. Joseph, Columbus, Indianapolis and Kansas City, with Denver equally divided. As already stated, grandparents would still further diminish the native element.

If we carry our comparison down to the 160 cities of 25,-000 population we shall find that in such cities is one half of the foreign born population, and we shall also see marked differences among the races. At one extreme, three fourths of those born in Russia, mainly Jews, live in these principal cities. and at the other extreme, one fifth of the Norwegians. The other Scandinavian countries and the Welsh and Swiss have about one third; while the English and Scotch are two fifths, Germany, Austria, Bohemia and Poland, one half to three

fifths, Ireland and Italy nearly two thirds.

Individual cities suggest striking comparisons. In New York the census shows 785,000 persons of German descent, a number equal to nearly one half the population of Berlin, and larger than that of any other German city, and larger even than the native element in New York (737,477). New York has nearly twice as many Irish (710,510) as Dublin, nearly as many Jews as Warsaw, half as many Italians as Rome, and 50,000 to 150,000 first and second generations from Scotland, Hungary, Poland, Austria and England. Chicago has more Germans than Dresden, one third as many Bohemians as Prague, one half as many Irish as Belfast, one half as many Scandinavians as Stockholm.

This influx of population to our cities, the most character-Vol. 10-9

istic and significant movement of the present generation, has additional significance when we classify it according to the motives of those who seek the cities, whether industrial or parasitic. The transformation from agriculture to manufactures and transportation has designated city occupations as the opportunities for quick and speculative accumulation of wealth, and in the cities the energetic, ambitious and educated classes congregate. From the farms of the American stock the sons leave a humdrum existence for the uncertain but magnificent rewards of industrialism. These become the business men, the heads of great enterprises, and the millionaires whose example hypnotizes the imagination of the farm lads throughout the land. Many of them find their level in clerical and professional occupations, but they escape the manual toil which to them is the token of subordination. manual portions are the peculiar province of the foreign immigrant, and foreign immigration is mainly a movement from the farms of Europe to the cities of America. The high wages of the American industries and occupations which radiate from American cities are to them the magnet which fortune seeking is to the American born. The cities, too, furnish that choice of employers and that easy reliance on charitable and friendly assistance which is so necessary to the indigent laborer looking for work. Thus it is that those races of immigrants the least self reliant or forehanded, like the Irish and the Italians, seek the cit, in greater proportions than those sturdy races like the Scandinavians, English, Scotch and Germans. The Jew, also, coming from the cities of Europe, seeks American cities by the very reason of his racial distaste for agriculture, and he finds there in his coreligionists the necessary assistance for a beginning in American livelihood.

At this point we gradually pass over from the industrial motives of city influx to the parasitic motives. The United Hebrew charities of New York have asserted that one fourth of the Jews of that city are applicants for charity, and the other charitable societies make similar estimates for the population at large. These estimates must certainly be exaggerated, and a careful analysis of their methods of keeping statistics will surely moderate such startling statements, but we must

accept them as the judgment of those who have the best means of knowing the conditions of poverty and pauperism in the metropolis. However exaggerated, they indicate an alarming extent of abject penury brought on by immigration, for it is mainly the immigrant and the children of the immigrant who swell the ranks of this indigent element in our great cities.

Those who are poverty stricken are not necessarily parasitic, but they occupy that intermediate stage between the industrial and the parasitic classes from which either of these classes may be recruited. If through continued poverty they become truly parasitic, then they pass over to the ranks of the criminal, the pauper, the vicious, the indolent and the vagrant,

who, like the industrial class, seek the cities.

The dangerous effects of city life on immigrants and the children of immigrants cannot be too strongly emphasized. This country can absorb millions of all races from Europe and can raise them and their descendants to relatively high standards of American citizenship in so far as it can find places for them on the farms; but the cities of this country not only do not raise them but are themselves dragged down to a low level by the parasitic and dependent conditions which they foster

among the immigrant element.

This fact is substantiated by a study of criminal and pau-Great caution is needed in this line of inquiry, especially since the eleventh census promulgated most oneous inferences from the statistics compiled under its direction. It was contended by the census authorities that for each million of the foreign born population there were 1,768 prisoners; while for each million of the native born there were only 898 prisoners, thus showing a tendency to criminality of the foreign born twice as great as that of the white native born. inference was possible through oversight of the important fact that prisoners are recruited mainly from adults, and that the proportion of foreign born adults to the foreign born population is much greater than that of the native born adults to the native population. If comparison be made of the number of male prisoners with the number of males of voting age, the proportions are materially different and more accurate.

But this analysis brings out a fact far more significant

than any yet adverted to, viz., that the native born children of immigrants show a proportion of criminality more than twice as great as that of the foreign born themselves, and nearly three times as great as that of the children of native

parents.

This significant fact is further brought out, and with it the obverse of the census mistake above referred to, when we examine the census inferences respecting juvenile criminals. The census calculations show that there are 250 juvenile offenders for every million of the native born population, and only 159 such offenders for every million of the foreign born population; but if we remember that the number of foreign born children is small, and then proceed to compare the number of boys who are offenders with the number of boys of school age, rather than with the number of persons of all ages, we shall have the following results, confining our attention to the north Atlantic states, where juvenile reformatories are more liberally provided than in other sections:

MALE JUVENILE OFFENDERS

Per million of male population of school age (5-20 years)
north Atlantic states: 1890. (Omitting unknown).
Native white, native parents
Native white, foreign parents
Foreign white
Colored 10,925

This table throws a very different light on the situation, for it shows that the tendency towards crime among juveniles, instead of being less for the foreign born than for the native born, is nearly three times as great as that of the children of American parentage, and that the tendency among native children of foreign parentage is more than three times as great as that among children of American parents.

This amazing criminality of the children of immigrants is almost wholly a product of city life, and it follows directly upon the incapacity of immigrant parents to control their children under city conditions. The boys especially, at an early age, lose respect for their parents, who cannot talk the language of the community, and who are ignorant and helpless in the whirl

of the struggle for existence, and are shut up during the daytime in shops and factories. On the streets and alleys, and in their gangs and in the schools the children evade parental discipline, and for them the home is practically nonexistent. Says a well informed student of race problems in New York: "Example after example might be given of tenement house families in which the parents—industrious peasant laborers have found themselves disgraced by idle and vicious grown sons and daughters. Cases taken from the records of charitable societies almost at random show these facts again and again."

Far different is it with those foreigners who settle in country districts where their children are under their constant oversight and, while the youngsters are learning the ways of America, they are also held by their parents to industrious habits. Children of such immigrants become substantial citizens, while children of the same race brought up in the cities become a recruiting constituency for hoodlums, vagabonds and criminals.

The reader must have observed in the preceding statistical estimates the startling preëminence of the negro in the ranks of criminals. His proportion of prisoners for adult males seems to be five times as great as that of the native stock, and nearly twice as great as that of foreign parentage, while for boys his portion in the north Atlantic states is eleven times as great as that of the corresponding native stock, and nearly four times as great as that of foreign parentage.

The negro perhaps suffers by way of discrimination in the number of arrests and convictions compared with the whites, yet it is significant that in proportion to total numbers the negro prisoners in the northern states are nearly twice as many as in the southern states, reaching the enormous proportion of 20,000 to the million of voting age in the north Atlantic states, but standing at less than 12,000 in the southern states. Here again city life works its degenerating effects, for the northern negroes are congregated mainly in towns and cities, while the southern negroes remain in the country.

Did space permit, it would prove an interesting quest to follow the several races through the various classes of crimes,

noting the relative seriousness of their offenses, and paying attention to the female offenders. Only one class of offenses can here be noted in detail, namely, that of public intoxication. Although classed as a crime, this offense borders on pauperism and the mental diseases, and its extreme prevalence indicates that the race in question is not overcoming the degenerating effects of competition and city life. tistics from Massachusetts seem to show that drunkenness prevails to the greatest extent in the order of preëminence among the Irish, Welsh, English and Scotch, and least among the Portuguese, Italians, Germans, Poles and Jews. ians owe their prominence in the lists of prisoners to their crimes of violence and very slightly to intoxication, though the latter is increasing among them. In the southern states the ravages of drink among the negroes have been so severe and accompanied with such outbreaks of violence that the policy of prohibition of the liquor traffic has been carried farther than in any other section of the country. Probably three fourths of the southern negroes live in prohibition counties: and were it not for the paternal restrictions imposed by such laws, the downward course of the negro race would doubtless have outrun considerably the speed it has actually attained.

Besides the crimes which spring from racial tendencies. there is a peculiar class of crimes springing largely from race prejudice and hatred. These are lynchings and mob violence. The United States presents the paradox of a nation where respect for law and constitutional forms has won most signal triumphs, yet where concerted violations of law have been most widespread. By a queer inversion of thought a crime committed jointly by many is not a crime, but a vindication of justice, just as a crime committed by authority of a nation is not a crime, but a virtue. Such crimes have not been continuous, but have arisen at times out of acute racial antago-The Knownothing agitation of 1840 to 1855, which prevailed among religious and patriotic Americans, was directed against the newly arrived flood of immigrants from Europe and Asia, and was marked by a state of lawlessness and mob rule such as had never before existed, especially in the cities of Boston, New York, Pittsburg, Cincinnati, Louisville

and Baltimore. These subsided or changed their object under the oncoming slavery crisis, and the Civil war itself was a grand resort to violence by the south on a question of race domina-Beginning again with the Kuklux and Whitecap uprisings in the seventies, mob rule drove the negroes back to a condition of subordination, but the lawless spirit then engendered has continued to show itself in the annual lynching of one hundred to two hundred negroes suspected or convicted of the more heinous crimes. Nor has this crime of the mob been restricted to the south, but it has spread to the north, and has become almost the accepted code of procedure throughout the land wherever negroes are heinously accused. In the northern instances this mob vengeance is sometimes wreaked on the entire race, for in the north the negro is more assertive, and defends his accused brother. But in the south the mob usually stops with vengeance on the individual guilty or supposedly

guilty, since the race in general is already cowed.

Other races suffer at the hands of mobs, such as the Chinese in Wyoming and California at the hands of American mine workers, Italians in Louisiana and California at the hands of citizens and laborers, Slovaks and Poles in Latimer, Pennsylvania, at the hands of a mob militia. With the rise of organized labor these race riots and militia shootings are increasing in number, and they often grow out of the efforts of older races of workmen to drive newer and backward races from their jobs, or the efforts of employers to destroy newly formed unions of these immigrant races. Many strikes are accompanied by an incipient race war where employers are endeavoring to make substitution, one race for another, of Irish, Germans, native whites, Italians, negroes, Poles, and so Even the long series of crimes against the Indians, to which the term "a century of dishonor" seems to have attached itself without protest, must be looked upon as the mob spirit of a superior race bent on despoiling a despised and inferior race. That the frenzied spirit of the mob, whether in strikes, panicky militia, Indian slaughter, or civil war, should so often have blackened the face of a nation sincerely dedicated to law and order is one of the penalties paid for experimenting on a problem of political and economic equality with material

marked by extreme racial inequality.

Prior to the year 1875 the laws of the United States imposed no prohibition upon the immigration of paupers from foreign countries, and not until the federal government took from the states the administration of the law in 1891 did the prohibitions of the existing law become reasonably effective. Since that year there have been anually debarred as likely to become public charges 431 to 5,812 arrivals, the latter number being debarred in the year 1903. In addition to those debarred at landing, there have been annually returned within one year after landing, 177 to 637 immigrants, who had meantime become public charges. From these statements it will be seen that, prior to 1891, it was possible and quite probable that many thousand paupers and prospective paupers were admitted by the immigration authorities, and consequently the proportion of paupers among the foreign born, as shown by the census of 1890 (the latest census covering the subject), was probably larger than that which will be shown by succeeding censuses. In the earlier years systematic arrangements were in force in foreign countries, especially Great Britain, to assist in the deportation of paupers to the United States, and therefore it is not surprising that, apart from race characteristics, there should have come to this country larger numbers of Irish paupers than those from any other nationality. The Irish in the United States, and, in a lesser degree the English and Scotch, have incurred an undeserved obloquy through their preëminence in the pauper records, because, during the period of their greatest migration, our laws had not vet been enacted and enforced for the exclusion of paupers. Taking, however, the census reports for 1890, and confining our attention to the north Atlantic states, where children are generally provided for in separate establishments, we have the following as the relative extent of pauperism among males.

Per million voting population, north Atlantic states, 1890.

Native white, native parents. 2,096

Native white, foreign parents 1,782

Foreign white 4,653

Colored 5,067

Here we see the counterpart of the estimates on crime, for the natives of foreign parentage show a smaller proportion of paupers than the natives of native parentage, while the foreign born themselves show double the relative amount of pauperism of the native element, and the colored paupers are two and one half times the native stock.

The census of 1890 also furnishes data for computations which would show the contributions of the different races and nationalities to the insane asylums and all benevolent institutions. In all cases it appears that the foreign born and the negroes exceed the native classes in their burden on the public. A state like New York suffers under this burden far beyond its just proportion, and, to take the matter of insanity, with one fourth of the population and one third of the voters foreign born, one half of the insane supported by the state of New York are foreign born. In New York city in the year 1900, of 2,936 inmates of almshouses only 564 were born in this country. When the permanent census bureau and the bureau of immigration, under authority recently granted, shall have made their reports on these important subjects, it will be possible to form more accurate judgments than the present scattered and defective statistics allow. Especially are we ignorant of the extent of outdoor pauperism, that is, the paupers who are aided in their homes and not in public or private institutions. this exceeds the institutional element is altogether probable, and, judging from the reports of charitable associations in various cities, much the greater portion of this class of poverty and pauperism is foreign by birth. There are two reports of the department of labor of great value and significance incidentally bearing on this subject, one of them showing for the Italians in Chicago their industrial and social conditions. According to this report the average earnings of Italians in that city in 1896 were \$6.41 per week for men and \$2.11 per week for women, and the average time unemployed by the wage earning element was over seven months. In another report of the department of labor it appears that the slum population of the cities of Baltimore, Chicago, New York and Philadelphia in 1893 was unemployed three months each year. With wages one dollar a day and employment only five months during the

year, it is marvelous that the Italians of Chicago, during the late period of depression, were not thrown in great numbers upon public relief. Yet, with the strict administration of the exclusion laws, leading to the deportation of over 2,000 Italians in 1903 as liable to become public charges, it is likely that the immigrants of that race, although low in poverty and standard of living, are fairly well screened of actual paupers.

POOR RELIEF IN THE UNITED STATES.

BY EMIL MUNSTERBERG.

[Emil Munsterberg, German sociologist; is city councillor and director of poor relief in the city of Berlin; is probably the greatest authority in the world in this line; editor of the Zeitschrift für das Armenwassen, the organ of the Centralstette für Arbeiterwohlfahrtseinrichtungen; Author: Die Armenpflege, Zur Frage der Stadtischen Selbstverwaltung, etc.] Copyright 1903 by The University of Chicago

The American system of poor relief resembles that of Switzerland in the lack of unity of character. There is no national American poor law. The federal government regulates poor relief in the District of Columbia, which occupies an exceptional position; and it supervises immigration, and of late has sought to restrict the entrance of pauperized and defective persons. In time of extraordinary necessity congress may give aid. The statistical offices of the union gather information relating to public relief and private charity in all the states. In general, poor relief is an affair of the states, which they administer either directly or through the local authorities of counties or townships.

In order to understand the development of the American poor relief system, one must properly estimate the manifold conditions which have been developed in history along economic lines. The reader should, as Henderson remarks, keep before his imagination a map of the United States, and hold steadily in mind the climatic, historic, and social differences: the striking contrasts between New England, the south, the fertile plains of the middle states, the vast prairies of the west, and the elevated mountain regions and fruitful valleys and coast climate of the Pacific states. Quite as various as these conditions are the forms of public and private care of the poor; in the western states they are frequently in the first stages of evolution; in the old, the so-called New England states, they are already affected by the evils of older culture. On the other hand, it occurs that quite young cities are superior to older lands, because they have appropriated to their

139

use the most recent devices in this field, while other regions

cling to the ancient methods.

Literary activity, in the restricted sense, is in America full of life. The writings and reports upon poor relief and charity extend to the neighboring fields of social philanthropy and to prison matters: a fact which is not entirely due to their inner relations, but goes with a situation in which the administration of prisons devolves upon related authorities. Thus Henderson, in his recent work, treats, in the second part, care of the dependents; in the third part, care of the defective and feeble minded: while in the last part he offers an introduction to criminal sociology. Henderson belongs in the ranks of those best acquainted with American poor relief, so that his book gives reliable instruction in respect to the prevalent principles of American efforts to help the dependent. The method of presentation is somewhat different from that of German works, not altogether so profound and systematic, but more pervaded by a practical purpose, with a decided intention not only to instruct, but also to inspire and to win practical helpers for the work.

A work laid out on a generous plan is entitled American Philanthropy of the Nineteenth Century, which was begun in the Charities Review of May, 1900, and which presents the views of specialists in the different branches of poor relief. The first article treats the general assumptions of social care of the poor. It explains the causes of poverty and the efforts made in America to deal with it. Here it is interesting to notice how the efforts to relieve distress are fundamentally the same in all lands, and how the same causes lead to the same observations and the same methods of help. As causes of dependence the author emphasizes ignorance, idleness, intemperance, shiftlessness, premature marriages, gambling, borrowing of pawnbrokers, and, finally, the countless benevolent agencies. An evil which we encounter in Germany is noticed by this writer—the increasing ease with which heads of families in great cities desert those dependent on them for support. He adds that it is surprising how often the deserted wife and mother manages to provide better for her family when she has no longer the man's weight on her neck. In the following divisions the author discusses the arrangements of public relief; the so-called Quincy report of 1821 and the Yates report of 1824, for the states of Massachusetts and New York, which were the occasion of a new tendency in relief methods, and which have led to a more individual treatment, akin to that of the Elberfeld system. In particular, the tendency to employ preventive measures and to improve the working of private charities through the later charity organization socie-

ties is brought into clear light.

The American National Conference of Charities and Correction sprang from the same motives as our German Verein fur Armenpflege und Wohlthatigkeit. In the autumn of 1873, at the suggestion of F. B. Sanborn, then secretary of the American Social Science association, several men came together who recognized the need of an annual conference on relief problems. and most of these persons were connected with the nine existing boards. After some correspondence, with favorable replies, the first conference was held in New York in 1874, which had representatives from four boards and written communications from four others. Not many more than one hundred persons took part in that conference, and its report filled less than fifty pages. During the succeeding years this organization has been greatly developed and has become one of the most significant factors in American charity. In 1898 the twenty fifth jubilee was celebrated in New York, the place of its origin, and the conference was welcomed by the highest state and municipal authorities. During these twenty five vears the activity of the conference has kept essentially in the same course. The object of the conference is to discuss problems in the field of charity, to give instruction, and to promote reforms. This purpose is served by the annual meetings, for which preparation is made, by printed reports. The conference covers a wide field and includes a part of general social movements for betterment; and, the number of subjects being very large at each meeting, attention is not concentrated upon a few points. This is possible only by the establishment of sections, with quite special technical problems for treatment. Thus there exist eleven special committees, each of which devotes particular attention to a single branch of charity—as

public poor relief, care of neglected and deserted children, organization of charities, etc. It is characteristic of American conditions that a special committee is appointed to handle the theme of political interference with poor relief. Quite as characteristic is the custom of having a sermon from some preacher. It is intended, as the jubilee report of 1898 declares, to strengthen among all participants the fundamental idea that care of the poor and benevolence have a religious basis, and are never to be considered simply from a merely economic or philanthropic point of view. The sermons, which are printed in the reports of the conference, are free from all pious cant and ecclesiastical partisanship, and are earnest and thoughtful incentives to charitable work from a positively Christian foundation.

A very useful part of the plan is the annually repeated survey of events in the several states. In 1900 there were forty of these reports, so that only ten states and territories were not represented. In each report a brief statement is made of recent legislation and new methods. In 1898 there were thorough discussions of the laws governing immigration and settlement, the management of medical relief and its abuses, and the care of crippled and feeble minded children: and in 1899 the organization of charities, public poor relief. prison reform, and care of neglected children were the central topics. The conference of 1900 was occupied with degeneration in rural districts, with the housing problem in small cities. with care for the epileptics and feeble minded. At the conference of 1901, among other topics were the following: subsidies from public funds to private charities and their relations to each other, the activities of personal care of the poor, relief of families in their homes, when the importance of individual treatment and voluntary human devotion to the needy was warmly emphasized. In comparing the American conference with our German union, the question is forced upon our attention whether the custom there, of treating all subjects of relief each year, even if cursorily, is to be preferred to ours, in which every year only certain important subjects are selected, but these are treated with all the apparatus of literary, statistical, and practical materials. Without doubt, the American method leads to repetitions, and frequently to superficial considerations; still it must be acknowledged that certain topics must be frequently discussed in order to be noticed, and that in this way the advance gained from time to time is more distinctly exhibited.

On the whole, one receives from the poor relief and charity of the United States the impression of a living interest in the revival of personal care for the poor; more than in other lands is the social importance of a sound method emphasized. A fresh inspiration pervades the American efforts, as in their industrial and economic work they keep their eyes open in order to learn more from every direction, the best and the newest; and as they take care of themselves to search for new ways, so they have in our field appropriated all the new inventions, and, especially, in the care of the sick and defective, have made great progress.

The most important means with which to combat corruption is the creation of state boards which are intrusted with the supervision of the arrangements for poor relief. This agency is not new and has already often been employed, although it has not always fulfilled its purpose, because the members of such boards are themselves open to partisan influence. At present especial pains are taken to give an independent position to the boards and to make them nonpartisan in character, or at least bipartisan, that is, with participation of both parties.

The first board of supervision was formed in 1863 in Massachusetts, and this, in 1867, was imitated in New York and Ohio. At this time twenty five states have such boards, among which are some specialized boards for the different branches of relief. Thus of late in Massachusetts, in consequence of careful investigation of the condition of public institutions, the former board of lunacy and charity has been replaced by three bodies: the state board of charity, the state board of insanity, and the state commission of prisons; and a similar arrangement is found in New York. The boards carry different titles, among which the most common are the state board of charity and corrections, or merely board of state charities; in Iowa, board of state institutions.

The duties of a board vary widely; most limit themselves

to control of public state institutions; while some go farther and supervise also private charities, in which capacity they have authority to inspect institutions, to require reports of a uniform style, and to set aside abuses. The boards are divided with reference to methods of administration, according as they are honor offices or are conducted by paid officials. With the first kind, goes independence of partisan influences, while others can give themselves more professionally and thoroughly to

their work, but are also more politically dependent.

Here belongs an interesting experiment of New York. There exists a state board of charities which essentially is conducted by unpaid officers, among whom all parties and denominations are represented. A reorganization of the board was planned by the governor, whose central principle was the replacement of the former board by a commissioner, and two state officials to be nominated by the governor; and from the reorganization he expected important economies. Against this plan almost unanimously the greater benevolent societies of New York in many assemblies declared their opposi-That an effective oversight must be provided was denied by no one. The supervising board, however, must remain free from influences which might tend to demoralize the public benevolent institutions; such a demoralization would be the result of partisan domination. On the whole, experience had shown that such arrangements, when conducted only by professional officials, not only accomplished very little, but also administered affairs in a more expensive way. If the governor, therefore, had the purpose to secure greater economy, he would in fact secure the opposite result. The saving by diminishing the number of members would be essentially a backward step in the activity of the board. The former state board has known how to maintain a strictly nonpartisan attitude, and through more than thirty years of existence has held the public confidence. A commission like the one planned would be a creature of the state administration, which would make a nonpartisan supervision impossible. In this connection it was mentioned that the members of the board who had an appropriation of over six thousand dollars for their personal expenses, had actually used only twenty five hundred dollars

Recently (1899) a board has been constituted in the District of Columbia which is subject to immediate administration of congress, after the attempt of 1898 to introduce one had failed. The opposition proceeded from a private charitable society which feared that the erection of such a board would interfere with their immediate and successful applications to congress. In 1900 a board of state aid and charities was founded in Maryland, under whose oversight were to be placed all public and private charitable institutions which received state aid; and here also the first bill at its introduction in 1898 was rejected. Iowa state board of control, founded in 1898, is giving general satisfaction. In Indiana a legislative visiting committee was appointed in 1901 to investigate all public and private institutions so far as they receive public aid. The committee consists of three persons, of whom two belong to the house and one to the senate of the general assembly. Significant are the words of the law which declares that only such men can be members of the committee as are of approved character and business skill, and who are neither directly nor indirectly financially interested. They have regularly, at a fixed time, before a session of the legislature, to prepare plans relating to appropriations. So far as I can see, the state board of charities, which has existed since 1889, is not affected by this law; so that the committee is simply a direct parliamentary commission. The committee must be bipartisan, inasmuch as only one member of a political party can belong to it. By a law of 1899, the administration of the prisons is placed on the same basis, so that only the administration of the state penitentiary remains under political control, a fact which was mentioned with regret in the last report of the board. In California a bill relating to the establishment of a state board was approved by both houses, and yet rejected by the governor's veto.

The complaint sometimes made by German writers, that American material is difficult to obtain, seems to me unfounded. In this connection I gratefully acknowledge that the materials, including voluminous reports, were sent to me on request, free of cost, and very promptly.

A current survey of the reports of the state boards and of

Vol. 10-10

new legislation is regularly published in the proceedings of the National Conference of Charities and Correction. The reports of the state boards are almost always prepared with great care. and furnish, especially on the statistical side, instructive views. The most recent report from New York (1900) declares that the continual change of officers in the poorhouses is very harmful to public welfare, and that reform of the civil service applied to this department would be an important advance. This report is remarkable both for extent and contents, although the reading of it is attended with difficulty. In not fewer than three thick volumes, and in nearly 3,000 printed pages, the entire system of the charities of New York is presented. The second half of the first part contains a great array of statistics, the second volume a complete directory of all the charitable institutions in New York, with exact statement of the purpose, the seat of administration, the officers, receipts and expenses, etc. In the same volume they have printed the legal regulations of the state board and poor laws. The year 1899 was unusually fruitful in laws on these subjects; not fewer than one hundred bills affecting poor relief directly or indirectly, were passed by the legislature; and the report remarks that some of these bills, in the judgment of the board, will be found unconstitutional. The administrative activity of the board is extended to all the public and to many private institutions, some of great importance. The evidences of careful supervision appear everywhere: a special report being rendered for each institution. Of state institutions subject to supervision, twelve were named, with a total population of 6,885 inmates and an expenditure of \$1,180,-000; most of these being devoted to the care of defectives (blind, deaf mutes, feeble-minded, etc.). Of private institutions which receive state aid, ten are mentioned, with 3,228 inmates and an expenditure of \$790,000, of which \$660,000 came from public funds. Here the institutions for deaf mutes are conspicuous.

An event of very deep import must be mentioned which illustrates the danger which seriously threatens one of the most vital functions of the state board—the oversight of private charities. It has importance for the other American states and is of interest far beyond the American borders. The law

relating to the state board contains in section IV the language: "To visit and inspect any charitable, eleemosynary, or correctional institution in this state, excepting prisons, whether receiving state aid or maintained by municipalities or otherwise."

In these words the state board had regarded itself as authorized to inspect the working of all charitable arrangements. When the board desired, in 1899, to inspect the building of the Society for the Prevention of Cruelty to Children, they were refused access, on the ground that this society did not belong in the class of charitable institutions. The state board, proceeding from the belief that the society belonged in the highest sense of the word to benevolent institutions—and. by the way, it is really a very beneficent work—applied to the attorney general in order to enforce its rights. Both parties appealed from the first decision, which suited neither of them. to the court, which unanimously supported the claim of the state board. Upon this the society appealed (on some ground), and then followed a decision of Judge O'Brien to which three judges agreed and from which a minority of them dissented, to the effect that the society was not a charitable institution, was not under the supervision of the state board, and that their power extended only to such institutions as were partly or entirely supported by the state. This decision excited both anxiety and indignation in the state board and in the minds of many persons who are convinced of the necessity of rigorous state supervision. The state board gives detailed information in regard to the affair. In various places, as in the Quarterly Record (June, 1900) and in the National Bulletin of Charities and Correction (August, 1900) Homer Folks and W.R. Stewart discuss the matter thoroughly and explain the effect of the judicial decision. Stewart especially deals with the question of supervision in its historical development and theoretical and practical importance, with the help of the entire materials of the judicial decisions. The practical significance lies in the result that this declaration of the highest court must have as a consequence a complete change in the practice of the state board, and that many of the institutions which have hitherto submitted without objection to supervision must now be withdrawn. While the board at the end of 1899 had inspected over 1,200 benevolent agencies, from this time 663 must be withdrawn because they are supported simply from private means and perform no public function. Among these are 47 asylums, 74 homes for the aged, 35 institutions for children, 63 general hospitals, etc. The very useful statistics relating to all the institutions which have been published by the board must be abandoned. The board, in whose quarterly report this discussion appears, very naturally expresses deep regret at this turn in affairs, which must result in public injury. The argument is significant, not only for the New York administra-

tion, but in relation to public supervision generally.

As a matter of fact, the effects are already noticeable in the refusal of several societies to receive inspectors. In vain the state board sought in the year past by legal means to obtain aid. One bill was introduced with the special object of requiring inspection of the society for the prevention of cruelty, and another aimed in general to extend the rights and duties of the state board to benevolent agencies which received no public subsidy, in cases where the state board had previously gained the consent of the administrators of these societies. Both these bills were defeated by the opposition of the president of the society already mentioned, while at the same time a new bill limited the right to supervise the state home for soldiers and sailors. We must join the state board and its friends in expressing the hope that the decision of the highest court may be rendered harmless by the enactment of a law which will subject all charitable agencies to control. The sound societies have no occasion to shun the light of publicity, while the corrupt can be unmasked only by this means.

In very happy contrast with the attitude of the Society for the Prevention of Cruelty is that of another great private society, the State Charities Aid association of New York, which was founded in 1872, with the object of doing all that unselfish citizens can do to improve the administration of public institutions. To Germans it seems a very unusual proceeding to organize a private society to labor for the better administration of public institutions; it is explained by the

peculiar American conditions. As a matter of fact, the influence of the society is considerable.

The poor law of the state of New York in sec. 30 grants the society particular authority to commission members to inspect all public institutions for the poor and the sick; such members must be residents of the locality of the institution. On the ground of this authorization the society, as appears in its last report, inspected the poorhouses and hospitals in forty three of the sixty one counties of the state. In addition it manifested a varied and far reaching activity. It represented many public charitable societies before state and municipal authorities, and obtained for them repeatedly help from public means. It subjected legal proposals relating to benevolent societies to careful criticism, and by energetic oral and printed discussion contributed to the acceptance of desirable measures.

Since the American relief system does not rest on a uniform law, as in England, it is left even more than in Switzerland to the legislative choice of the several states, in which, owing to the lack of a common historical development like that of Switzerland, and to the uncommonly dissimilar economic and social conditions, a very great unlikeness in the organization of poor relief is developed. The care of the poor is administered through the counties or towns or, in certain cases, immediately by the state. The organization of public poor relief on the neighborhood principle corresponds to the development in the older communities, where, as an outgrowth of the customs of the mother country, self government was an affair of local settlements, while in the territories settled by larger groups a wider community, the county, undertook the administration. There are also intermediate forms where obligation and authority are suitably divided between the local and the state corporations. This appears especially in the obligation of the county to support those poor who belong to no town. In general there is a decisive tendency to recognize the peculiar needs of the cities, and to intrust to them the care of their own poor. Yet the city administrations suffer from the same influences as those of the state, although of late, in the greater cities, a change has been introduced. New York and Boston have completely reorganized their poor-relief sys-

tem, while in Baltimore new ordinances went into effect in 1900. In general there is a strong tendency to take away from cities and counties the care for two classes of dependents, children and the insane. Several states have introduced an exclusively state system for unprotected children, and require that the insane be placed in state institutions. The relation of the states to one another causes considerable difficulty because, as in Switzerland, the laws of the states are so unlike. In most of the states there exist settlement laws according to which a settlement or residence for a certain time obliges the township to provide relief. As a rule an unqualified residence for a certain time suffices; and this period in eleven western states is from one to six months, in nine states one year, in Virginia three years; while in some states, as in Connecticut, New York, Ohio, the condition of self support, and in some states, as Massachusetts and Pennsylvania, the possession of property, is required. In ten states there is no requirement for settlement, while in two others it is merely necessary that the person concerned has come within the state boundary in order to receive public aid. Very strict regulations exist in relation to the removal of dependents. Persons without settlement are sent away as quickly as possible. Persons who receive aid outside of their settlement are generally relieved temporarily, and then sent back to the place of their settlement at the cost of the city or county.

The difficulties growing out of this situation, which increase with the extension of the means of transportation, and have occupied public thought frequently, have been in recent years repeatedly the topic of discussions in the National conferences. Reports in 1898 and 1899 were made, a part of which treated immigration from outside of America, while the other dealt with interstate migration and settlement in the relations of American states to one another. The prohibitions of immigration, which are exclusively the affair of congress, and which date from an earlier period (1882 and 1885), exclude persons from entering America without means, as well as foreign laborers under contract with employers. The movement against the admission of immigrants and in favor of widening the prohibition of immigration is closely connected with the burden of

poor relief of the insane. A very unequal use seems to be made of existing laws. In his report of 1898 Sanborn investigates the problem with special reference to the insane. According to his view, which he supports with reliable figures, there is no doubt that immigrants have greatly contributed to the increasing number of the insane. Thus in Massachusetts during seventeen years the population grew from 1,780,000 to 2,580,000, the number of the insane from 3,168 to 6,547, which indicates a growth in the population of 45 per cent and of 107 per cent for the insane. Guenther opposes with great energy the recent tendency to limit immigration; especially he rejects the suggestion that the immigrants must pass an educational

test. He says:

"No one can desire more than I do that all elements which are dangerous to us should be excluded; but I do not say that a person physically and mentally sound and of a good moral character should be refused admission to this land simply because he never had an opportunity to attend school. The chief object of the agitation is to limit immigration, from a self seeking, and on the whole, unjustifiable purpose of preventing the restriction of the American laborers' industrial The fact is overlooked that the newcomers are not only producers, but are also consumers. I am quite clear that the professional labor agitators are responsible for this crusade against immigration. Since they know no other means of keeping back friends, they imagine that the educational test will help them at least a little. If these people could do it, they would put an end to immigration altogether. Senators and representatives in congress know how to use these people for their own ends, and when they preached the limitation of immigration they claimed that they did it for the glory of the people of the United States. They asserted that the law was not directed against the Germans and Scandinavians, and would scarcely touch the Irish, but they wished to exclude the Italians, the Russian Jews, and the Hungarians. since these are good for nothing and corrupt. What do they care for these people, those who are neither Italians, Russian Jews, nor Hungarians? Such expressions are unworthy of a wise people. The people against whom these restrictions are

aimed belong to the Caucasian race, which in religion, art, and science stands above all other peoples of the earth. There are good and bad Italians, good and bad Hungarians, good and bad Americans. Under present laws we can exclude all bad elements, whether they come from Germany, Sweden, Russia, or any other country; but I stand by this proposition, that a man is not proved to be bad because he can not read or write."

Much more important for public poor relief is the question of interstate migration and settlement. On the ground of a report made at New York the conference decided to establish a standing committee of seven members which should work for the introduction of uniform settlement laws for which there exists a real demand. The committee made a report on the subject the following year, and fixed upon the general outlines of a uniform law, the most important points of which are: agreement upon the period of residence necessary to obtain state and local settlements, the return of persons who do not belong to the community, and the creation of a board for the decision of mooted questions. On the whole, these propositions come near to the German system of legal settlement. Acceptance of relief, reception into a public institution, etc. are not to be reckoned in. Persons who in this way have not obtained the rights of residence in a locality, but who have remained a year in the state, are to be counted citizens of the country in which they have remained the longest time. Persons who have become a burden to the relief authorities, and have no settlement are to be sent away as quickly as possible, and that to the state to which they belong according to the previous interpretation.

The public poor relief, like that of England, rests upon the more or less exclusive application of the system of indoor relief. The poorhouses or almshouses are, as Warner calls them, the charitable catch-all for the community. The laws exclude public outdoor relief partly in cases of permanent dependence and entirely for able bodied persons, so that only the sick, defective, and similar persons may be relieved temporarily by the outdoor method. Outdoor relief, for example, is abolished in many of the great cities, as New York, Brooklyn, Baltimore.

The attitude of state relief is only intelligible when one

considers that a richly developed private charity precisely in the field of outdoor relief comes to the aid of public relief, and that the effort to keep the care of children, the feeble minded, the sick, and the defective separate from other public poor relief is constantly gaining ground. F. Almy has published a study in the Charities Review on the relation between private and public outdoor poor relief, in which he has brought together the facts about public and private outdoor relief in forty American cities. The figures are, as the author himself makes clear, not very satisfactory in relation to private charity. since a very great part of private charity can not be represented in figures. Nevertheless the tables give an approximate representation of the importance of private charity, which always comes into relief where public outdoor charity is not employed or only in limited degree, as is seen particularly in Baltimore, New York, San Francisco and St. Louis. In certain cities, as Boston, considerable expenditures from both sides nearly balance each other, while in others, as Cincinnati and New Orleans, expenditures for public poor relief, as well as for private charity, are described as unimportant. In some cities, as in Syracuse, public poor relief gives assistance in large measure, while private charity seems to be lacking. The figures seem to me not very reliable, since it is impossible that in ten of the forty cities no private charity should be given, and in ten others an inconsiderable sum. In these cases accurate information seems to have been lacking. At the same time, a certain interaction between the two factors is not to be denied.

Against the extension of legal outdoor relief the argument is often urged that it represses private benevolence, or at least makes its task appear less exigent. Among recognized authorities Dr. Walk, of Philadelphia, declares that no need has been felt in his city for restoring municipal outdoor relief, and that private benevolence was entirely adequate. Miss Richmond, of Baltimore, thinks that the anxiety about doing away with this system may be compared to the dread of bringing infants out of overheated rooms into the fresh air.

Wilson remarks in his report (National Conference, 1900) that he had made inquiries of many charity workers in smaller

cities in order to learn their opinions and experience, and that almost all had expressed themselves as favorable to private outdoor relief, although some believed that they must defer the entire abolition of outdoor relief on account of the special circumstances of their community. Especially worthy of notice is his account of Tacoma, where relief from public means had been suspended, and where investigation and the menace of sending visitors caused many to decline further help from public poor relief. The incisive language of this part of the report is as follows:

"Cut off from their supplies at the courthouse, the long procession which had received its monthly dole of alms from that source took up its march for this office. Great was its disappointment when we began to ask questions and to speak of sending visitors. Not a few were disgusted and flatly declared, "Well, if you're that particular, I guess we won't bother vou." The upshot of the business was that scores at once went about doing what they would better have been doing long before, i. e., taking care of themselves. \$150 a month easily took the place of the \$1,000 formerly paid, and with what advantage to the recipients you very well know."

A remark of Bailward seems to be significant also within

the limits for German relations. He says:

"It is self evident that in individual cases it is much cheaper to give any one sixty cents in outdoor relief than to support him in a poorhouse at \$1.25 a week; in the long run, however, nothing is dearer than this procedure. The more outdoor relief is applied, the more demand there will be, after a

time, for indoor relief."

I have laid emphasis on this remark, because in Germany also the facts again and again awaken similar reflections. Very often the American reports pay us the compliment of saving that our individualizing and honor office system would admit of extended outdoor relief. In the last analysis the question of the right use of one or the other system, or of both in reciprocal relations, is, as Henderson rightly remarks, a question of practical administration whose success depends upon the value of its organs. The apprehension in respect to admission of legal outdoor relief is therefore doubtless connected with the conditions in the administration of relief, and which on the whole justify the opinion. Public agencies, as we know them, can not individualize.

The subject was thoroughly discussed in the National Conference, May, 1901, in connection with the report of F. H. McLean, which treated the conditions in Montreal, where public relief is entirely wanting. It was argued that private charity alone is unable to fulfill the duties of poor relief, that it would even be demoralized and its principal task be neglected, if it were compelled to do that for which by its nature it is not suited. There was a decided tendency to favor public poor relief in all those cases in which a careful control of personal conduct is necessary, while private charity is better adapted to the cases in which free activity is possible. Fundamentally this is the principle of division which is actually made in Germany, although here the laws go much farther in the promotion of the general poor relief. It is well worth noting, and is applicable to conditions outside America also, that private charity itself, where it conducts the entire business of poor relief, as in Montreal, may, quite as much as public relief, degenerate into unreflecting routine.

Still, we must acknowledge that the efforts to individualize in all forms of administrations of public relief has made important advances in recent times. The condition here is similar to that in England. Removal of children, the sick and defectives from the poorhouses, better classification of those who remain in the poorhouses, according to character, are demands which have been strongly urged for American

poorhouses, and partly carried out.

In a report which Alice N. Lircoln made to the National Conference in 1898 on the classification of paupers she made the claim that in poorhouses rewards for good conduct, and deprivations (not punishments) for bad, are admissable, and that earnest endeavors must be made to treat the poor as individuals, not as members of a class; that separate rooms for the inmates of different grades must be provided; and that the officers of poorhouses must be taken from a higher social grade. Similarly, Byers, in his report on public poor relief, makes prominent the deplorable mingling of different classes of the

poor in the same house and the same rooms. In this field, almost without exception, the states show an actual advance; none of the reports which lie before me omit the mention of the ever extending care for children and their removal from the poorhouses, and the erection of special hospitals, particularly for the insane and defectives.

The question of relief of the unemployed, which is so closely related to the question of poorhouses, has also awakened lively interest among American administrators of poor relief. Tramps in most of the states are treated as offenders and are sent to the prison, house of correction, or workhouse, or sometimes to the poorhouse. As a rule, they are required to work in return for accommodations; and sometimes punishments are added to labor. The length of the confinement is ordinarily fixed by the sentence. It is higher in the New England states and gradually diminishes toward the west and south, where the sentence seldom extends beyond ninety days. The punishment in the east is more severe than in the west, and yet the plague of beggars and tramps is by no means under control. For the unemployed in general, who do not belong to the class of professional tramps and beggars, the workhouse test—that is, the offer to support in return for labor—is declared by experts to be necessary in order to distinguish between those who are willing to work and the shirks.

In the field of medical relief we notice an advanced movement which aims, like the one in England, to remove the sick and defective from poorhouses and to provide special arrangements for them. First of all I may refer to the newly established Craig colony for epileptics in the state of New York. It was opened early in 1896, and has since received 530 epileptics; at present it has about 400 inmates, and a capacity of 700. The importance of the institution lies in this, that it goes far beyond a mere place of detention, and makes possible a family life in groups similar to the well known colony of Bodelschwingh, in Bielefeld, Germany. On land in the country, cottages are erected in which the inmates live like families. The grouping of the sick and careful observation of them receive special attention, which shows its effect in a remarkable diminution of the number and gravity of the attacks. The

physical as well as the mental development is promoted. kinds of work are carried on in the colony; school instruction, partly in evening schools, trade instruction, natural science studies, and occupations in handwork and gardening. Many recreations and entertainments are furnished, as lectures, concerts, sports, and celebrations of national and other festivals. The entire establishment is primarily designed for dependent persons of the state of New York, but pay patients are also admitted so far as there is room. The report of the state board expresses satisfaction with the results so far at-Similar arrangements exist in Ohio and Massachusetts. In most of the other states epileptics are still sent to the almshouse. In May, 1901, was held the twenty fifth annual meeting of the National Association of Institutions for the Feeble Minded; and there the separation of the epileptics from others who suffer from defects in the nervous system in special institutions or colonies, and a careful classification like that of New York were approved. Similar views were expressed at the National Conference in 1901.

To the care of defectives, especially of children and youths, great attention and large means are devoted. In almost all states, institutions exist for the instruction of deafmute and blind children. These are either state institutions or private institutions, which are paid by the state for the care of children sent to them. This, for example, is the method for both deaf-mute and blind children in Massachusetts, Connecticut, New Hampshire, Pennsylvania, and for the deaf mutes of Oklahoma and New York. Generally the institutions are designed for children of school age. residence varies in duration, and is between two and six years, the former in Texas and Oregon, the latter in Alabama. In sixteen states a distinction is made between dependents and those who pay, but usually board and education are gratuitous. In addition to these special institutions there are also in some of the larger cities, provision for the instruction of deaf-mute and blind children in the public schools, as, for example, in Pennsylvania, where school districts which have eight or more deaf mutes among twenty thousand children must provide suitable instruction for them. In Wisconsin the state appro-

priates \$100 for each child of this class.

In contrast with institutions for the blind and deaf-mute children, there is adequate provision for the adult blind, who, for the most part, if not otherwise supported, are sent to the poorhouse. Exceptions are found in Ohio and California. In Iowa, of late, a work place was erected for the blind, and its object is to give them occupation and to enable them to support themselves. In Maryland the institution for the juvenile blind is authorized to employ a part of the income of its funds for the erection of workrooms and places for the sale of wares made by the blind. In New York the conductors of the institution for the blind in Batavia are authorized to assist

needy pupils in their occupations at state cost.

America has given special attention to the education and care of deaf mutes. At present more than ten thousand deafmute children are sheltered in schools and homes, although by no means all such children enjoy this benefit. The Illinois report states that the great institution at Jacksonville has received during the last few years between 500 and 550 children. but that more deaf-mute children are growing up without any instructions than those who are taught. In the institutions themselves the best educational methods are employed, and a domestic life with work, entertainment, and recreative plays is provided. Especially for experts it is worthy of remark that instruction in sign language is gradually giving way to oral speech. A comparative view shows that the first method was employed with 4,987 pupils in 1892, and only 3,992 at present. while the complete oral instruction was given to 4,451 in 1900 and to only 963 in 1892; and partial oral instruction shows a decrease from 3,282 to 1,848. The relative percentage therefore, at present is 49 for the sign language, oral instruction 43. and partial oral instruction 18. The Illinois school began in 1893 to emphasize oral instruction. The division has grown so that in 1900 it included 296 pupils, while those who received instruction in the sign system included 250 pupils.

In this connection especial attention is drawn to two works: Histories of American Schools for the Deaf, in three volumes, by Fay, which was prepared for the World's Fair of

1893, and contains reports, with numerous illustrations, on all American institutions; and the work of Fay, Marriages of the Deaf in America, which shows astonishing industry. It grew out of a proposition of Graham Bell, the celebrated inventor of the telephone, who deserves great honor for his service in the cause of deaf mutes in America, and who established a fund for this purpose. The object of the investigation was to discover whether marriages of deaf persons contribute more than other marriages to the increase of deaf mutes, and especially whether this is true in a higher degree when both parties are deaf than when only one is afflicted, and whether certain classes of the deaf are predisposed to have deaf children. The result is represented separately for each of the 4,471 persons counted. The principal result is that marriages of the deaf are more frequent in America than in Europe, and that marriages of deaf persons there have increased in an extraordinary degree, during the last ten years from 0.02 per cent to 2.27 per The increase is rightly ascribed to the establishment of numerous schools for deaf mutes, which not only favor acquaintance of defective persons with one another, but also bring deaf mutes into nearer relations with society in general, and so enable them to marry and rear a family. The majority of married deaf mutes are married to the deaf, in the ratio of 72 to 28 compared to those who marry hearing persons. marriages of the first kind run a happier course than those of the second, among which the number of divorces is greater. Both works are to be strongly recommended to specialists, and the book of Fay relating to marriage contains a complete bibliography of the subject

The pamphlet on Helen Keller reports an almost incredible devotion, on the one side, and an extraordinary development of faculties in a defective child. This remarkable girl who has frequently been discussed in literature relating to the deaf and the blind, although she is both blind and deaf, received a complete scientific education, on the ground of which she was admitted in 1899 to Radcliffe college. In this pamphlet one may read by what a vivid and immeasurably patient method

this result, bordering on miracle, was reached.

For crippled children, the Childrens' Aid society, moved by

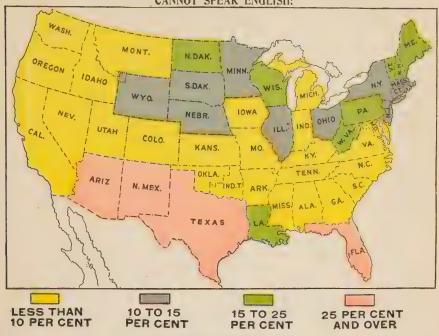
the Guild for Crippled Children of the poor, established day schools in which, in addition to elementary instruction, they learn a light handicraft (making cheap toys) and are enabled to earn something at home in their leisure hours. A convenient carriage takes the children to the schools in the morning and returns them to their homes in the afternoon. school, in addition to the teacher who is intrusted with the care of the sick and with the kindergarten, there is a nurse who washes, massages, bandages, gives necessary care in the dispensary or hospital, instructs the parents in methods of dealing with the children, and induces them to furnish necessary treatment. The advantage of this day school over the hospital, apart from the diminution in cost and the easier care for a large number of children, consists in this, that the interest in the children is not taken away from the parents, but they are induced to manifest even greater interest and love. At the beginning it was difficult for the society to bring the children together; the mothers were distrustful of everything that looked like a hospital; hard to persuade because they feared admonition or punishment for the neglect, or of refusal to apply the prescribed treatment. Thus the school in the first year had only twenty pupils, and it was with difficulty that the number was increased. The school now numbers forty five pupils and enjoys general confidence.

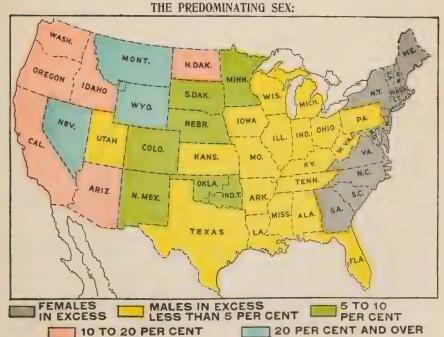
The rooms of the day school are two large instruction rooms, a dining room with adjoining kitchen, and a large clothes room in which are found all necessary appliances for bathing, bandaging, massaging, etc. Benevolent ladies have undertaken to provide food and clothing; they meet the expenses required for beds, rolling chairs, carriages, and the like. On the seacoast they have established a summer home for convalescent children. Physicians occasionally visit the institution and assist the teachers by their advice. How essential this kind of treatment is appears from the fact that the Children's Aid society has established two other classes in different localities and projected two new schools. In this connection may be mentioned a law which authorizes the establishment of a state hospital for crippled children, with an appropriation of \$15,000. The report from Minnesota says





PROPORTION OF FOREIGN BORN WHITES 10 YEARS OF AGE AND OVER WHO CANNOT SPEAK ENGLISH:







that in 1897, when the first state hospital for crippled children was founded, the medical college of the state university was legally required for two years to treat the children gratuitously and care for them in every way; \$5,000 was set apart for each year. The members of the medical faculty thereupon made a contract with the hospital, according to the terms of which the care of the children, with the exception of medical treatment, was committed to a superintendent. The university paid for this service weekly \$3.75 for each child between two and twelve years of age, and \$4.50 for those between twelve and sixteen years. After an experience of two years this arrangement was voluntarily continued. The hospital set apart a building with thirty beds for the exclusive use of crippled children, which at present is so full that some patients must be sheltered in the central building. The state hospital for crippled children thus became an independent institution, for whose support \$16,000

were appropriated for the next two years.

The movement for combating tuberculosis has made progress in America. The number of institutions thus far provided for dependent persons is not very great; the most important being the St. Joseph hospital in New York, with 350 beds, and the Cook county hospital in Dunning, Ill., with 380; two institutions, with 125 and 200 beds in Massachusetts: one with 92 beds in Brooklyn; and one with 100 beds in Baltimore. A second sanatorium of the Montefiore home was recently opened, with 100 places, which they hope to increase to 350, so that with the one earlier erected it can provide for 500 sufferers. New institutions have been erected in New Hampshire, New York, and Connecticut. In Pennsylvania the society for preventing tuberculosis has erected a sanatorium. The Adirondack college sanatorium of Dr. Trudeau occupies a peculiar position. It has published its fifteenth annual report, and Liebe, in his book on public hygiene, remarks that it must fill the German physicians in sanatoriums with a kind of envy. It is a colony in which from 250 to 300 invalids are annually received. The extension of the care of the sick by trained nurses, who, during three or four years, are thoroughly instructed in schools connected with hospitals is very important. The work is satisfactory, and is by no means Vol. 10-11

regarded as of little value, as in Germany so often happens.

It is as true of America as of England that the care of children belongs to the most promising field of relief effort. The physical and moral education of poor children, with the exception of those in poorhouses, is almost entirely neglected. They grow up in dirt, indolence, and sickness, and many fall victims to premature death, or are taken to prison. On the contrary, the health and mortality of children in the poorhouses are preserved; they receive an education which enables them to care for themselves.

The arrangements for children correspond to those in other lands,—institutional care in great orphanages, of which America possesses some of the first rank, or in small homes; and the union of both systems by reception of the children at first in a central place, and their transfer hence to family care—the so-called state public school system, or the Michigan system, because it was first applied in Michigan, and now enjoys a great reputation in America. Along with the exclusively public and exclusively private care of children exists the system of subsidies from public means to private institutions.

More and more the system of family care gains in importance, although at first it was hindered in the attempt to remove children from poorhouses by the tendency to replace poorhouses with splendid institutions for children. Life in a family, especially in a well ordered rural family, prepares the child for life far more satisfactorily than is possible in an institution. In an institution the children are taught rather too much of heavenly and too little of earthly things. The atmosphere is only too well adapted to train them in dependence. Shelter is provided; food is always ready; clothing, good beds, warm rooms are at their disposal, without the least thought or care on the part of the children.

Altogether different is family care. It is said in a report

of Illinois in 1899:

"In a real domestic household all members of a family are bound together by reciprocal ties. In the nature of family life, persons help each other and make sacrifices in turn. There is the great world in small, and the relations of the members to each other correspond to those which the child will find in later years in society. It is a work place, a school of labor, where daily practice in household duties prepares the child for further duties."

Family life alone can teach the children self control, submission to the conditions of practical life, and capacity for independent action. From the standpoint of poor relief, we mention also the advantage that family care is essentially cheaper than that of the institution. If there is a reasonably general agreement that family care is theoretically the best form, this does not imply that institutions in a certain measure may not be accepted, and least of all requires us to shut our eyes to the dangers of inadequate family care. Institutions are most of all necessary to the reception of children, to observe them, and to select for them suitable homes. There are many children who, on account of their character, or on account of their physical or psychical defects, are not adapted to home life, or proper families cannot be found in which to place them. By the extension of the group system in the larger institutions, and by the erection of homes, the danger which attends institutional care is materially diminished. The dangers of inadequate family care are very thoroughly proved in the reports of several authors; Hebberd especially goes into the subject fully, and illustrates with many examples how unscrupulously the placing of children is often conducted, how frequently the foster parents regard the care of the children simply as a source of income and exploit the labor power of the older children in the most shameless manner.

It is remarkable that Englishmen and Americans, who are so sensitive about state paternalism in the field of relief are ready to demand state supervision, and discover in this the best protection against abuses.

Of essential importance for the entire development of child-helping work in America, as in England, is the activity of private societies like the children's aid societies. Such

societies exist in most of the large cities.

Help is afforded according to the individual case in many forms; indoor or outdoor relief, training for a calling, improving the health by summer outings, etc. Principally, however, the effort of the society is directed to removing chil-

dren from the crowded city and placing them in the country under wholesome conditions of life, as apprentices or as foster children; an effort which, in view of the increasing current toward the greater cities and industrial centers of America, has great significance, and is worthy of thought in similar situations in Germany. In one year 581 children were sent to the country, of whom 326 found homes and 255 boarding places for payment. From neglected families came in all, 1,013 persons, mostly children, for whom in the state of New York work or other help was found through rich supporters, so that a total of 1,594 persons was removed from the city to the country. Of 245 children intrusted to the institutions, 170 were placed in families, the others returned to their relatives. In spite of the greater cost of the care exercised in selection and control required by the placing system, and although the conditions of life surrounding them were more wholesome and helpful to the development of the children, yet the cost of family care in the country fell greatly below that of institutions in the city; a child in a city institution costs yearly \$120, as against \$35 for rural family care. Two hundred and fifteen children were taught in the farm school in order to prepare them for positions in the country. From the farm school were sent 573 pupils, of whom 316 found situations: the others had left school for various reasons or were returned to their relatives. The society possesses twenty six day and evening schools, which were attended by 14,615 pupils with a daily average of 7,063. Three of the schools have special classes for defective and crippled children, for which special teachers and attendants are employed. The children are brought in conveyances to the school, and returned to their homes in the same way. These auxiliary classes prove themselves very helpful. since needy crippled children grow up generally without instruction and frequently without adequate care.

Of greater importance are the visits which the teachers make in the homes of their pupils in order to gain insight into their surroundings, and to regulate attendance upon the schools. One year 17,970 such visits were made, with the result that 1,043 truant children were referred to the society and 7,583 cases of extreme neglect were made known and help

secured from the society. The lodging houses of the society offered temporary shelter to 5,163 boys and girls; the average daily population being 413. For 797 of these children positions were found, 215 went to the farm school, and 133 returned to their relatives.

Private societies also have led the way for the legal protection of children against cruelty and abuse; the first of these was founded in New York in 1875. At present 157 of these exist, a part of which are also devoted to the protection of animals; and it is interesting to note that societies for the prevention of cruelty to animals existed in America before the organized efforts to protect children.

The New York society has taken for its task the care of maltreated, neglected, criminal, and vicious children. It receives complaint for investigation, brings charges in cases made known to it, and enforces legal regulations for the protection of

the children.

The children left in the care of the society are placed in institutions temporarily, or permanently placed in families; often, however, they remain under supervision with their relatives.

The care for neglected children, which is partly included in the general laws on the subject, remains far behind the English methods, since federal legislation is not involved, and the laws of particular states are indecisive. There exists in the more advanced states a tendency to exclude children and youths from the prisons and receive them into reform schools, which are called, as in England, reformatories, and industrial schools. The names have been changed repeatedly because it was observed that a certain reproach was attached to all of them after a time, which was an obstacle to the success of the pupil. In all institutions of this kind an essential factor for improvement and education is industrial training.

Worthy of note, in respect to the condition of the reform schools for girls, is a study of the discipline in reformatory institutions for youth. Since it was apparent that very defective administration in a number of these institutions had led to excesses, the New Jersey State Charities Aid association sent out a schedule of sixteen questions, the principal of which were: principles of discipline, ordinary methods of discipline, corporal chastisement, cellular confinement, immorality as a difficult factor in the problem of rescue, incorrigibles, special education of the officers and teachers, large institutions in contrast with the group system. From the answers sent in, some of the principal typical suggestions will here be noticed: The object of education must first of all be to give the children to understand that the voluntary obedience to the rule of the institution will serve their own welfare. Trespasses are to be punished only in extreme cases. Great importance is attached to individual treatment, since one method has quite different effects on children of different temperaments.

Reports are also made upon the different methods of punishment, as the employment of a book of complaints, loss of certain privileges, exclusion from recreations, withdrawal of a mark of distinction; all of which serves to spur the children to industry and good behavior. Whipping is declared by most of the directors to be injurious, and therefore to be applied only in particular cases, while solitary confinement is widely used, though in mild form. In respect to the difficult problem of immorality, almost all depends on the personality of the director. The education must be so directed as to keep the children free from unwholesome suggestions, as by means of fresh air, daily physical exercise, constant occupation of body and mind, cleanliness, and nutritious diet. On the whole, the judgment was that vices of this kind are prevented more by moral training than by corporal punishment. Of the two systems of education, the preference is given to the small group over the large institution.

Of its kind quite unique, one may say genuinely American, is the undertaking called the George junior republic. It is a reform work for neglected children, and attempts to develop in boys and girls from the worst parts of New York a sense of individual responsibility and independence, economy, and regard for law. They are made acquainted with the forms and importance of organized administration and they are taught sympathy and patriotism. The George junior republic is the creation of William R. George, of New York, and is a reform school on the basis of self government. Mr. George proceeds

from the conviction that neglected children, even those that come from the families of criminals, can not merely by stern discipline be made into better men, but that education by the action of the children on each other, under the intelligent direction of an adult, will ripen the best fruit. Further, he believes that these children can best be educated to become useful members of civilized society, if they can be placed in relations similar to those of the world at large. Here as there the means of living can be obtained only by labor. No one is required to work, but "he who will not work shall not eat." The teacher does not use compulsion, but the conditions themselves, as in real life, are compulsory. Both these thoughts, self government and the compelling might of conditions, training to labor for support, are remarkably well carried out in the George junior republic, and have become so conspicuous. that the institution is imitated in the different parts of the United States. The whole arrangement, which originated in a vacation colony which Mr. George received at his house in the country near Freeville, and began with thirty very poor children, gradually developed into a permanent settlement with the form of a miniature state, in which the members themselves exercise police power, hold court, and administer The republic has the rights of a corporation, and is conducted by a board of trustees at whose head Mr. George The means of support, since the product of the children's work naturally covers but a small part of the expense, are furnished for the most part by an association called the republic association. The territory occupied by the republic contains forty acres; it is an elevated plateau in an attractive district of the state of New York, about a half hour from the town of Freeville. On the farm are several buildings, one of which is occupied by Mr. George and his family. All the houses are built by the boys under the direction of adult craftsmen, and it is hoped that after a time all the children will be placed in small separate houses in groups of ten or fifteen under an adult, each group with its own kitchen, table, and recreation room.

At first Mr. George made himself president of the republic, and distributed the most important offices of the little state

among adults. In the year 1896 these were removed from their offices and replaced by boys, since the children understood better than the men how to get along with their comrades, and the feeling of responsibility awakened in them self respect, and a striving for honorable behavior. In 1887 for the first time the president was also chosen from among them, and that for one year. By his side stands the legislature, consisting of a senate whose members are chosen for two weeks, and the house of representatives, whose appointments have force for only one week; so that all capable citizens can take part in the legislative work. Every occupation class elects one representative to twelve persons for the house, and also one for the senate. The laws of the republic are those of the state of New York, but amendments may be made by the legislature and the president. For every offense the citizens are brought to account. If a complaint is laid, a session of the court is called to be held in the evening. In simple police cases only the accuser and the plaintiff appear before the judge, who alone renders a decision; in more important instances, six jurymen and several witnesses are called, and only in complicated cases attorneys. Punishments are usually fines, work, and confinement. For repetition of an offense the punishment rises progressively. In exceptional cases other means are employed. For example, in the case of a girl on whom no punishment made an impression, her hair was shorn. That worked wonders, so deeply did the child feel her honor touched. The incorrigible are excluded from the republic. Those who conduct themselves exceptionally well under correction are admitted earlier to freedom. The office of policeman is about the most respectable and desirable in the republic. To attain it an examination is required. The policemen are paid out of the taxes and are dressed in uniform. Each is responsible to the police board, and, like every officer, loses his position at once if he does not fill it conscientiously. He is severely punished for overlooking an offense or permitting a prisoner to escape; and a misuse of his power brings a penalty. The longer the children remain in the republic, the less frequently, as a rule. do they need correction. While in 1896, fourteen serious offenses were registered, in 1897 but two were noted. It is remarkable that offenses which no reform school or prison was

able to uproot have here disappeared.

The work of the children includes every thing necessary to be done. The girls perform household work, such as washing. ironing, sewing, cleaning, cooking, etc., in which they receive instruction. The other work falls to the boys, as building. carpentering, shoemaking, bookbinding, barbering, etc., under the direction of craftsmen; the agricultural labors are directed by farmers in the neighborhood. The citizens are required to attend school until they are sixteen years of age, daily—Saturday and Sunday excepted-from 10 to 12 and 1 to 3. For attendance each one receives weekly \$1.75, but only when they work for their support. Besides school and work there is provided plentiful recreation and mental occupation. Communication of the children with their relatives during their stay in the republic is materially restricted. At first frequent correspondence is kept up, since they are usually homesick, but gradually it is neglected. They soon discover that their new views no longer correspond to those of their former companions. As they learn to despise their former sinful life, they can no longer value its environment. The conduct of their parents and old friends seems now to be objectionable, and if they continue in contact with the home, it loses its influence over them. When the children grow up they are placed at trades or are otherwise instructed; but Mr and Mrs. George keep them in mind and correspond with them. If the employer complains of the conduct of his apprentice, the latter is given earnest advice, and, if necessity arises, is brought back to the republic. Of late, in Auburn, a society of former junior republicans has been formed and holds together with fidelity and in close relationship with Mr. George.

Such poor children may be developed into capable and good citizens, not merely by punishment and by a temporarily forced change of conduct, but by the pressure of surroundings,

voluntary choice, and better insight.

Of particular methods of caring for children may be mentioned, in conclusion, the summer colonies, to which great attention is given.

Although the movement to establish these colonies in America reaches back to the first third of the nineteenth century, it found its first important expression in the work of a public school teacher, Miss E. Very, in 1879, who established, with the support of a woman's educational society, the first vacation school in Boston, whose purpose it was by instruction and play to act upon the children in their time out of school and withdraw them from the vicious influences of the street; a thought which found imitation and extension throughout the whole country. Originally the vacation schools were designed for children between the ages of two and twenty years, and the program, in order to win as many children as possible, laid emphasis upon amusement. After longer experience, the necessity of separating children according to age, work, and play became apparent; so that now, in addition to the vacation schools proper, there are also play schools and open spaces, while for the smallest children school takes the character of a kindergarten. Children between the ages of ten and fifteen receive training in sloyd, instruction in drawing, and in natural history by means of holiday trips into the country or parks for the observation of animal and plant nature; singing and industrial occupation, as tailoring, cooking, etc., always so far as possible adapted to the individual needs of the pupil or his home life. Not seldom the instruction in the vacation school helps to determine the choice of future vocations. The length of a course is from four to eight, as a rule six, weeks, the daily instruction usually of three hours; two courses a day are given either successively, or in the forenoon and afternoon. place of teaching is in a room of a public building; the direction of the affairs is in the hands of trained teachers; the daily average cost per child varies between 5 and 25 cents.

As in England, so also in America, private charities develop in a high degree. This corresponds not only to the peculiarities of American beneficence already indicated, but also to the fact that the public poor authority is rather averse to outdoor relief, and limits itself, especially in the greater cities, to indoor relief, in poorhouses and other institutions.

American charity has to contend in a higher measure than is true on the continent with the evils of division and absence of system. To the insight into the dangers of this condition many central societies owe their origin, which, according to the English example, are called charity organization societies. The principle of charity organization societies remains essentially the same, and yet we must refer to them again and again, because unfortunately, even in Germany, they are so commonly neglected. When Johnson in his report for 1899 at the National Conference used the words, "In spite of the danger of being wearisome and of repeating what has been said 30 times before," every one who works in these matters practically will be disposed with him to employ the same introduction and to repeat for the thirtieth or the one hundredth time these things, just because it is so necessary to repeat fundamental principles. Glenn, in his paper on the necessity of organization, has formulated these principles very well:

A charity organization society offers itself as a central point of information, where the leaders of various enterprises may secure information about each other, as well as about the

poor, and as a clearing house of activities and ideas.

It also collects materials relating to the poor and gives information to all who have an interest in them, prepares statements concerning the charitable provisions of the city, and offers a central point for obtaining counsel in help. All this is in the spirit of reciprocal confidence and with the view of repressing the abuses of charity in order to have all the more

power of assisting those who are needy.

The general arrangements of these societies are every where similar, the chief aim being to unite the benevolent efforts and of providing particular kinds of help to serve special needs, as for example securing employment, provision of shelter and refuge for women, etc. The division of labor between standing committees is common to all, each being charged with a special task. They all emphasize the necessity of personal help, and constantly renew the appeal for coöperation. The title page of the Buffalo report is adorned with the words:

"Let no one think that he can discharge his duty to the poor by contributing to the society. You can never perform your full duty to the poor through a society; what we need is personal help, and this society was founded to secure it. Our effort is, through division into districts and in other ways, to find a personal friend for every poor family, and we earnestly request all to stand by us as voluntary helpers in benevolent activity."

The societies, apart from their own enterprises, give none of their own means for support, but seek to investigate cases referred to them and to secure means in individual cases, and to refer cases for further aid to other institutions which stand

in close relations with them.

A peculiar position is occupied by the United Jewish charities in New York. It grew out of the same discovery of unsystematic and divided charity to which the Charity Organization society owed its origin; and after the experience of a quarter of a century it declares its satisfaction that its efforts have contributed materially to the diminution of these evils; but at the same time it expresses the wish to have more means and more personal service at its disposal. It also has a number of standing committees and a number of institutions of its own, among which an educational institution for girls and an employment bureau are conspicuous. Of special importance is the work for immigrants, who come mostly from Russia and Austria. Each year the society handles a population equal to that of a medium sized city, which arrives in America without knowledge of the language, often helpless, and by the regulations of the government threatened with the impossibility of obtaining employment. Counsel is given the immigrants even when they are not in absolute want, the destitute are relieved, and means are provided for returning those rejected by the public authorities. Up to 1890 the work was conducted for the most part by the Hebrew Immigrant Aid society, to which the association in 1884 joined its efforts, with a committee which worked especially at the landing places. In 1890 the Baron Hirsch fund was founded, whose administrators were members of the committee of the association; from this fund and from the Jewish Colonization society, founded by Baron Hirsch at the same time, the association received the means for assisting immigrants. In 1891-92 the Russian Transportation society, the American Association for the Relief of Russians, and the Central Russian Refugee committee were

established, in which the central board of the association was represented. In the report the assistance of immigration authorities is praised. To the efforts of the association was due the change of classification of Jewish immigrants; while up to 1898 they had been classified by confession, from that time they have been classified like other immigrants, according to

the place of their origin.

As in England, though not to the same extent, the work of the Salvation Army has been developed in America, and has found even more favorable conditions, because there is no state church, and the religious and sectarian activities have a free field. The organizer and leader of the movement in America is Booth Tucker, son-in-law of the general. In all there are 160 organizations of the Salvation Army, among which are children's asylums, homes for women and girls, lying-in homes, public kitchens, employment bureaus, homes for discharged prisoners, nursing, workmen's colonies and winter relief; and every where the tendency is not to support, but to aid, to call forth all the powers and capacity of the person who is in want and assist him to regain his independence. The principle is held that all help offered must be paid for, so far as possible, in money or work. Noteworthy are the three agricultural colonies established in Colorado, California, and Ohio, on which thirty buildings have been erected, and where about two hundred men and women have been settled, and of whom the greater number have obtained independent homes. In America, as in Europe, the current sets toward the cities. most of all to the largest, and countless unemployed are massed there, while there are far more places in agriculture than can be filled. A singular enterprise is the sending of poor families, who otherwise could never breathe pure air to the country. In this division of the army work, outings by water or land are provided, and frequently street car companies furnish free transportation. The work out of which the entire service of the Salvation Army has grown—work in the worst quarters of the great cities—is carried on in the great cities of America with splendid and untiring devotion. It is conducted by women, and even more by young girls, who fearlessly venture into these quarters, and in spite of all failures, all scorn and threats, and actual danger to life, give themselves to the most wretched classes of beggars, drunkards, harlots, and criminals, in order to aid them, with patience, forbearance, and goodness, to uprightness. These girls live in the neighborhood of their work, clothe themselves in a modest way, and are, after a time, we are assured, entirely safe under the protection of the whole population of the district, where they can go about freely and without peril. Granted that the success in comparison with the great multitude is small: as examples of personal devotion and of capacity to awaken again, even in the outcast, the little spark of human feeling, these heroines of the Salva-

tion Army are unsurpassed.

The work of the army goes beyond the boundaries of that which we are accustomed to call private charity, and approaches, especially in the last mentioned activity, that which is called, after the English example, a settlement. The movement has gained in importance and extent during recent years. The principal effort is not in the direction of private charity, but the furtherance of social convictions, the elevation of the condition of the less fortunate classes, and the creation of means of recreation, etc. No form of work which can be useful is alien to the settlements; and so they have care of children in kindergartens and nurseries, care for youths, provision for sports, play grounds, clubs and places of recreation. chief feature of the work is that persons who are disposed to render such service reside in the neighborhood which they wish to serve, and pursue the purposes of the settlements by working, not only on the people, but, above all, with them. During recent years the movement has gained in solidity and clearness of purpose. In the report which the college settlements association issued for 1900 there is an explanation of the work from its beginning, and of the views with which the pioneers of the movement undertook the enterprise. persons not only wished to work together with the poorer classes, but also in a spirit of devotion to leave behind them a good part of their former comforts, to live more simply, and to set a good example. There has been a complete change. The helpful disposition remains, but the purpose of identifying themselves almost entirely with the life and conditions of the poorer classes has almost disappeared. On the contrary, it is now thought that the work can be better accomplished by means of suitable and comfortable home surroundings. At the same time it is a peculiarity of the more important settlements which stand in direct connection with the universities, and therefore are called university settlements, that they become schools of social service. The report from New York says:

"We seek before all to convince the people who come to us that they must first learn the conditions under which the poorer classes live before they attempt to change those conditions. So they learn by experience both the major points of the enterprise, the social field on which they labor, and the psychological and ethical purpose which characterizes the

undertaking."

The settlement generally keeps aloof from poor relief and charity, although it lies in the nature of the case that in the attempt to give social help many cases are encountered in which a condition of extreme poverty must be relieved. This work is handed over to the public and private organizations which exist for this purpose. The settlement itself wishes to help others who are independent of poor relief, to spur them to self reliance, and to aid them in creating social conditions which will furnish the basis of independence and self support. A characteristic phase of the movement is the predominance of the feminine element in the work, the administrative committee of the settlements association being entirely composed of women, and even in the university settlements the women are in the majority.

THE DRINK PROBLEM.

BY THOMAS DAVIDSON CROTHERS.

[Thomas Davidson Crothers, professor of nervous and mental diseases in the New York school of clinical medicine, became assistant professor of the practice of medicine at Albany medical college in 1871; becoming assistant physician in the New York state inebriate asylum in 1875, he has since made a specialty of inebriety, and since 1880 has been superintendent of the Walnut Lodge hospital for the treatment of alcohol and opium inebriates; he is editor of the Journal of Inebriety, a quarterly journal for medical study of inebriety and he is generally regarded as the leading American authority on this subject.] Copyright 1900 by Brooklyn Ethical Association

Some general conception of this problem may be obtained from the single statistical fact that in one year over half a million persons were arrested in this country charged with intoxication and petty crimes associated or following from inebriety. It is a reasonable assumption that at least half as many more persons used spirits to excess that did not come under legal notice. If to this be added the opium, chloral, and other drug takers, the numbers will reach enormous proportions. Admitting the possible errors that may exist in such statistics, there are many facts and reasons for believing that the extent and fatality of the drink evil are more serious and of greater magnitude than have ever been represented. Personal observation in almost every town and community confirms this; and each year the nature and extent of this evil become more and more prominent.

There is apparent in the public mind a growing sense of danger which is manifest in temperance agitations and various efforts to neutralize and break up this evil. This feeling of alarm has concentrated into various great crusade movements and organized societies, with a vast machinery of county, state, and national divisions. A political party fully organized is in the field, with the central object of obtaining power to control and break up this drink disease. Great church societies are urging moral means and remedies for the same purpose. Revival orators are holding meetings and creating a public sentiment of alarm in all parts of the country. In this country and Canada there are eighty newspapers and magazines published, weekly and monthly, exclusively devoted to

this cause. Books, pamphlets, sermons, and tracts, almost without number, are coming from the press constantly. A literature that is sensational and aggressive is scattered in all directions.

With this increasing agitation, apparently, the sale of spirits is increasing; and many persons are confident that inebriety is also increasing. Statistics undoubtedly show that the fatality, injury, and losses following the use of alcohol have

increased far beyond the growth of population.

There is a deep psychological meaning in this which indicates the movement of unknown laws and forces above the confusion and roar of agitation. If we take a higher point of view, this problem appears to be one of the great natural eliminative processes in the evolutionary march of the race. Here the armies of inebriates, the weak and defective, and those who resort to alcohol, and are unable to adapt themselves to the changes of life and environment, are driven out as unfit—separated and crowded out by the larger, stronger types of the race. This view is sustained by the history and appearance of the drink victims in every community. From both inheritance and neglect, they bear physiological and psychological marks of degeneration. Even those who deal in spirits show the same signs and indications.

It is an interesting inquiry where this army of inebriates began; what point in the march have they reached at present, in what direction is their movement, and what laws and

forces are controlling and shaping their course?

The use of spirits can be traced back to the infancy of the race and has ever been associated with its ignorance, weakness, and disease. While it has followed the march of humanity from the lower to the higher, from its infancy up through all stages of growth and development, it has manifested a peculiar movement of its own. Thus, in some ages, it has been very prominent, creating alarm and attracting the attention of historians; then it has declined and been unnoticed. Then it has come again into prominence and disappeared as before. This very significant tide-like movement has extended over the drink history of centuries, and has followed in some unknown way the great convulsions and

revolutions of nations and races. In modern times it is traceable in the statistics of courts where inebriety is punished, and points to the operation of laws at present unknown. This oscillatory movement of inebriety is receding, and appears to

be governed by growth and mental vigor of the race.

Up to the last century the use of spirits was almost universal. Total abstainers were very rare and excessive use was common and unnoticed. Nearly all authorities agree that the inebriety of the past was not marked by the delirium and frenzy of modern times. The less sensitive brains of our ancestors became early palsied from spirits, and they suffered from dementia and death. At banquets the standard of strength was ability to keep awake while drinking spirits. Men used spirits and became stupid, and continued to drink for a lifetime, or until death from some acute or epidemic disease. Little or no reference is found in medical histories to alcohol as the cause of insanity, epilepsy, or idiocy, or, in fact, as the cause of any disease. Any excessive or fatal use of spirits was explained as the result of vice, free will, or demoniacal influences. The common people drank the coarser and heavier spirits, and the wealthy drank wine and light alcohols.

Evidently the excessive use of spirits in all classes has slowly declined with the increase of knowledge and progressive development of the race. The drink evil has followed the race march as a shadow in outline, generally growing less and less distinct up to the last century. From that time it has appeared in a new form. The old time stupor from the effects of spirits has changed to delirium, delusions, and crime symptoms. Mental exhaustion, insanity, and acute brain and nerve degeneration have become prominent in most cases. Moderate drinking is becoming more and more impossible. The moderate drinker of to-day becomes the inebriate of to-morrow, and dies the next day of acute disease, or is laid away in some asylum.

The type and forms of inebriety have changed. The developed brain of the modern man is more acutely sensitive to alcohol, and is more likely to find in spirits a relief from the mental strains he is subjected to. The drink evil has become

a mental disease, an insanity whose origin, progress, development, and decline can be traced and studied.

This fact was unconsciously recognized at the beginning of the 19th century in the organization of societies and efforts to break up and combat its influence. The drunkenness of the past appeared in a new light, and with it came the growing faith that it could be removed and prevented. From the first temperance society in 1816, with eight members, down to the present, there has been a steady increase of efforts and means to check and prevent inebriety. The armies of total abstainers and temperance reformers have rapidly increased; and literally no topic of civilization is more widely discussed

to-day in all circles of society.

Although statistics may show an increase in the sale of spirits proportionally greater than the increase of the population, and the number of persons drinking may appear to be larger for a time in certain sections, yet a wider study, extending over a series of years, will show that this drink army is disbanding and disappearing. The tide-like oscillation of inebriety to which we have referred is often traceable in temperance revival movements which spring up suddenly and disappear mysteriously; or, in other words, inebriety increases up to a certain point and then recedes. The retrograde movement begins when the highest level is reached in sudden temperance reformatory efforts which go on with intensity for a time, then die away abruptly.

Through all this, the same eternal laws of evolution are moving the race upward and outward, and crushing out the defectives and all who are or may become incompetent and

unfit to bear the burdens of humanity.

It is startling to find that through all this movement and agitation there has been no change in the theory of the nature and character of inebriety. This drink problem has changed in form and prominence, and is the central topic of thousands of moralists, reformers, and philanthropists, and yet the same theories of a moral origin, the same explanations of a heart deceitful and desperately wicked, the same story of vice and moral depravity, are repeated and accepted as the true explanation of its character and causes. All the literature and

the remedial efforts to check and prevent inebriety are based on such theories. All physical agencies in the causation are unrecognized, and nothing but the moral weakness and the wicked impulses of the victim are supposed to be active causes. Such are some of the facts which appear from a general study

of the drink problem of to-day.

If we ascend above the conflict and agitation of the present and lose sight of all such theories, a different view appears. The drink army stretches away before us like a river, with a resistless onward sweep beyond the uncertainties of human will and the feebleness of human effort. To understand this, we must go back to the sources, to the springs and streams and causative influences which have accumulated and united in forming this drink current. This is done by a careful study and grouping of the histories of a large number of cases. The conclusions from such a study by many observers agree that heredity is the most prominent cause and is present in over eighty per cent of all inebriates.

This heredity includes the degenerations which are transmitted from consumptive, insane, idiotic, epileptic, hysterical, and other nervous diseases, together with alcoholic and moderate drinking ancestors. Inebriety may be the direct legacy of any of these diseases, and especially from alcoholic and drugtaking parents. If drunken children should not follow from inebriate parents, some other of these allied forms of disease is sure to appear, either in the first or second generation. The drink craze is a symptom of physical degeneration and tendency to early exhaustion, and a hint of the incapacity of the brain to regulate and continue the vital processes along the lines

designed by nature.

Parents who use alcohol are literally crippling their children, lessening their vigor and the possibility of living natural lives. Thus parents are literally trustees to receive and transmit to the future the germ form and force. If they fail by neglect or ignorance, they come into conflict with inexorable laws which punish by pain, suffering, and extinction. This army of inebriates are, to a large extent, the product and result of the diseases of their ancestors—a reflection of the physical and mental degeneration of the race that has passed away.

The use of wine at meals, defective nutrition, ungoverned appetites and impulses, neglect of healthy body and brain exercise, break out in the children in inebriety or some allied disease with almost absolute certainty. It is our physical sins and diseases of to-day that are preparing the ground for all sorts of nerve diseases and inebriety in the next generation. It is our failures, neglect, and weakness that are transmitted in low vitality, defective power of resistance, and tendency to disease, making every condition favorable for a short, degenerate life and early death.

The free will we urge these poor inebriates to exercise only existed in their ancestors. They alone could have diverted and changed the currents of health and made free will possible in the children. The hereditary inebriate is born into the world with a low power of vitality and states of central brain exhaustion which are ever seeking relief; and alcohol, by its narcotic action, supplies this demand. This impulse to degeneration may pass down one or two generations before

appearing as inebriety again.

No other disease is more positively transmitted than inebriety, either directly or indirectly, in some associated disease. A study of heredity reveals a most startling view of the forces at our command to change and prevent the inebriety of the future. In the good time coming, not far away, this field will be occupied by practical scientists, and we shall be able to break up this great polluted spring and stop the tide of disease which follows.

Another active factor more apparent and controllable in the problem of inebriety is that of marriage. At present indiscriminate marriages are largely influential in intensifying and continuing this alcoholic stream. The assertion that inebriety is bred and cultivated by indiscriminate marriages can be proved in the experience of every community. Stockmen, who have only the most selfish interests, act on an analogous fact, and avoid raising defective stock by the selection of the strongest and best types for the continuation of the race. Our neglect to recognize this great principle of nature is seen in the common marriages of many persons who are literally human wreckage and remnants of a race stock approaching

extinction. Criminals, paupers, inebriates, and others notoriously far down on the road to dissolution, are permitted to marry and raise children freighted with a truly frightful legacy of degeneration. The dangerous classes of every community, the inmates of hospitals and asylums, are the living witnesses of this blunder.

Higher up in the social scale unions are constantly taking place, the progeny of which must be defective and incapable of living normal lives. Were it not for the higher laws of nature, which continuously throw out and exterminate these unfit, the race would soon be doomed to helpless degeneracy. The children from these dangerous marriages are so far crippled as to be unable to live normally and in accord with the laws of health, and hence become diseased and subject to the laws of dissolution.

One of the saddest facts in the history of these degenerates is the very common sacrifice of noble women, who marry them under the delusion that they are suffering from a moral disorder which can be reached and cured by love and sympathy. The marriage of chronic inebriates on this principle is a crime and offense against the highest laws of humanity, that should be punished by the severest penalties. In the near future the state will recognize this fact in its laws. It is this defective heredity, increased and intensified by marriages with equally bad stock, that is the great fountain spring from which inebriety comes.

There are other active sources from which inebriety springs that may be seen in every community. Thus starvation in childhood by overfeeding and underfeeding is followed by defective nutrition and growth, and finally by inebriety. Degenerations and defective growths from diseases of childhood slumber along to the period of maturity, then break out into inebriety from the slightest exciting causes.

Injury of the brain and nervous system in early and mature life, such as sunstroke, shocks, blows, and diseases which are attended with delirium and unconsciousness, often develop into inebriety. Want of rest, strains, and profound drains of the body bring on exhaustion and changes in the nerve centers that are often manifest in inebriety. The moment

alcohol is taken in large quantity a tremendous activity and

concentration of degenerative forces begin.

Alcohol, of all drugs, seems most to intensify and provoke disease, and to afford the most favorable conditions for the destruction of cell and nerve tissue. The incline to acute disease and final death which follows the use of spirits is sharp, and the rush downward is rapid and deceptive. The history of a large number of these cases points to the same symptoms, the same progress, direction, and termination.

Like a river springing from certain sources and moving on down, diverted here and there by rocks, mountains, banks, and islands, so this drink stream changes and winds about, but always passes the same sections with the same course, and always reaches the same ocean. It is a startling fact that inebriates are literally a new army of the insane, which have sprung up and camped all along the frontiers of modern civil-

ization.

One of the most unaccountable facts of this drink army and problem, notwithstanding all the agitation of means and methods for relief, is the saloon, its support and defense by the public. Every where, for the mere formality of a license, saloons are permitted and encouraged for the sale of spirits, under the most attractive conditions and surroundings. Art, luxury, comfort, and elegance combine to make these places attractive resorts; mirrors, flashing glass ornaments, colored liquids, pungent odors, are arranged to create thirst and stimulate the sense of taste.

Thus the senses are appealed to in the most powerful way to use alcohol in all forms. As a result, the saloon has become a terrible power over the minds and conduct of a vast number of weak, defective persons, whose mental and physical health it breaks up and destroys. Nothing can be more certain than this fact. In every community, under all possible circumstances, the saloon is destructive, antagonizing every effort to struggle from the lower to the higher, and every law of growth and development. Why should the saloon be tolerated a moment in any intelligent community? Whenever the dangers from the use of alcohol are even partially realized, why should not the saloon be the first object of at-

tack? What right has the saloon to exist? What right has

it to peril every interest of law and order?

The answer is to be found in the same old realm of superstitious theories that cling with deathless grasp to the public mind; theories of the food value of alcohol, and its moderate use as favoring longevity and happiness—these are the real

supports of the saloon.

The saloon is the real schoolhouse for the cultivation and development of inebriety, and is the most dangerous disease center that can exist in any community. The only word that can be said in its favor is that its real power is eliminative it hurries on the process of dissolution in the individual. It makes all its patrons unfit, and then speedily drives them down to death and extinction. It destroys the individual by switching him from the main line on to the side track, ending in destruction. It will be the wonderment of the future that the saloon should exist so long, with nothing but the densest and most criminal ignorance to support it. Alcohol must be recognized in its true character as a medicine, and used in the same way as arsenic or strychnine. These are some of the facts that are not understood practically, that are not studied in the temperance literature and lectures, and are literally unknown even to the poor drink victims.

There is a psychological factor in this problem that is still more obscure and startling, and yet it enters very minutely into the practical solution of the question. It is the unequal growth and decay of the several brain faculties in each individual which come into prominence from the use of

alcohol.

From heredity, disease, starvation, injury, and other complex causes, certain parts of the brain undergo degeneration or are undeveloped. Some parts become atrophied or shrunken; others are enlarged into abnormal proportions. As a result, some faculties seem highly developed, others are exhausted early, and an abnormal mentality follows in both cases. Inebriety is a symptom of this abnormity. It indicates that the brain faculties are disorganized and out of harmony. The natural adjustment is broken up either temporarily or permanently. The two most commonly observed

faculties which diverge most widely are the moral and intellectual senses. Often these are at different levels in the same individual. In the alcoholic victim the moral sense suffers first and is always the most diseased. The inebriate may have a complete palsy of this sense, and yet have all the other faculties fairly acute or so slightly deranged as to be unnoticed. This moral or ethical sense is the highest perfection of character, and always degenerates rapidly in all persons who use spirits to excess. The capacity to think right and act right is blunted, palsied, and destroyed, while the intellectual sensibility may be apparently unimpaired. This inability to adjust conduct ethically is the direct result in many cases of the paralyzing action of alcohol. No doubt in some instances this faculty was very feebly developed before spirits were used, or it may have been wanting altogether. In that case the degeneration from alcohol makes all efforts to build this up impossible.

The practical bearing of these facts is illustrated in many ways, particularly in the failure to restore inebriates by appeals to their moral sense alone. The influence of the pledge and prayer on persons who have no sense of duty or moral obligation is almost useless. Often such persons have an intellectual sense keen enough to take advantage of the circumstances and exhibit a cunning characteristic of criminals, passing as reformers and martyrs, and arousing interest and enthusiasm only to profit by it in some unusual manner.

In this way temperance revivalists, by passionate appeals to the moral and emotional senses of inebriates, may secure thousands of pledges and conversions to a life of total abstinence, followed by relapses startling and unexplainable. The moral or ethical sense of this new army of inebriates is paralyzed or destroyed, and efforts directed to this side alone are worse than failures.

The only road possible to reach this class of cases is by the physical, by the use of means and measures that appeal to the entire organism. The degeneration of brain cells, nerve tissue, and organic forces, combined with defective and diseased moral and ethical senses, presents a condition of individual disease that seems difficult to cure. This fact opens up a new field of effort and suggests a different class of means and remedies. The question arises, Can we halt this army and turn it into other paths? Can we stay this tide of destruction and the terrible losses which follow from

it? Can we solve this problem and stop its evils?

Appeals to the moral nature of the inebriate are useless, because that part of the brain is palsied. Intimidation by punishment and suffering fails for the same reason. The pledge is powerless because the will is unstable and incapable of consistent action. The prayer fails because the emotional nature is incapable of permanent impressions. Thus education, morals, law, and religion are powerless to remove or check this disorder.

The inebriate is literally a madman, who persists in destroying himself at all hazards and irrespective of all interests of his relatives, friends, and the community. Such conduct forfeits all right to personal liberty and makes him an outlaw and an antagonist to all the highest interests of society. Any one who persists in drinking to intoxication is dangerous and may at any moment peril the interests of individuals or the community he lives in and commit acts of very serious consequences. He should be restrained and be confined in a hospital, where his conduct can be regulated by others.

Rev. Dr. Bellows said long ago in an address on this subject: "No man has the right to peril the interests of others. Society learns nothing by tolerating the presence of any one whose liberty is dangerous. Society gains nothing by holding for an hour any one who is fit to be at large. Liberty and human rights gain nothing by allowing any man to be at large for a moment who is destroying himself, his family, and neighbors. All we need is what we are fast gaining a possession of—

the tests and gauges of this fitness or unfitness."

The true remedy is a united public sentiment that this army of inebriates are diseased and dangerous, and the highest interests of society require that they should be quarantined and their personal liberty restricted, not as criminals for short sentences in jails, not as willful sinners, to be helped or cured by fear, suffering, and the law of vengeance, but as diseased and helpless people needing guardianship, medical care, and

the direction of others. Like cases of mania, smallpox, typhus fever, and contagious diseases, they need isolation and treatment in special surroundings. We want a clear public recognition of these facts; then means will be adopted to prevent the victim from going on to chronic stages before any efforts

are made to help him.

The legal efforts to cure this evil are more fatal and dangerous than the saloon, by increasing the very evil they seek to remove. Thus saloons are licensed and protected, and, both directly and indirectly, the use of spirits is encouraged and made attractive. The victim is excused and tolerated until he reaches a chronic stage, and violates some law; then he is fined and imprisoned under conditions that intensify and increase his disease. Statistics show that ninety nine per cent of all victims who are punished by the courts the first time by fines and imprisonment relapse, and appear again and again for the same offense as long as they live. They receive the name of rounders, and are not infrequently sentenced hundreds of times in the course of years. The station house, jail, and machinery of law, from the absence of physical and mental aids, are fatal in their influence.

Yet public sentiment hugs this terrible delusion of vice, and sustains the police courts in efforts that make it more and more impossible for the victims to recover. Thus the law destroys the inebriate by punishment as a criminal, and the church disowns and drives him away as a sinner; society looks down upon him as having a vice that can be controlled at will. It is the same old superstitious theory of a theological or moral origin of evil, which from time to time has been used to explain every phenomenon of nature, that sustains

and keeps up this delusion.

Science has opened up a new field of remedial forces, and points out a solution of this drink problem, in special hospitals organized as industrial military schools. Here the inebriates may be housed and kept for a lifetime if they are incurable. These hospitals are to be organized with every means to build up both body and mind, to protect the victim from himself, and to provide every hygienic and physiological agency req-

uisite for a normal life.

Laws should be passed authorizing the arrest of any one known to be drinking spirits continuously or at intervals. There should be no waiting until the victim is intoxicated or commits some overt offense. He should come under legal control as soon as evidence of his habitual use of spirits can be obtained. Thus all classes, from the poor pauper to the rich man or his son, who are in the early stages of inebriety, should be forced into conditions of sober, rational living, and continued under legal restraint, either in an asylum or out on parole, until their mental and physical health is restored and evidence of temperate living can be established.

If such asylums were in operation and such laws in force, supported by public sentiment, this army of inebriates would disappear from our streets, and with it the crime, losses, and suffering so apparent. The saloons and distilleries would pass away in obedience to a higher law than legal prohibition.

This is the voice of science: to quarantine the inebriate in a hospital, as if suffering from a contagion; to stop the disease at the fountain, to remove the victim from all causes and conditions favoring inebriety. If the inebriate is curable, he can be restored to health and society again; if not, he should remain a ward of the state, and be kept under conditions most

favorable for health and the public good.

Industrial hospitals for this army of inebriates can be built and supported by a tax on liquor dealers, and thus relieve the producer and taxpayer. To a large extent, after they are established they can be made self supporting. The general principles and many of the details of these industrial hospitals are already practically worked out in most of the asylums, prisons, and reformatories of the country. The Elmira reformatory and many of the present inebriate asylums are literal demonstrations of this fact.

In a wider sense, this solution of the drink problem promises not only to house and check the present evils, but to place these victims in the best possible conditions for scientific study. Here the great underlying causes—physiological, psychological, and sociological—which have developed and set apart this vast army of what has been aptly termed border-line maniacs can be discovered and understood. There is no

way to comprehend inebriety except from exact studies of inebriates in the most favorable surroundings.

It is something more than the impulse to use spirits to excess, more than a weak will and moral carelessness, which is the cause of inebriety. This disease is beyond cure by punishment or appeals to the emotions, beyond educational and religious influences, beyond remedy by license and prohibition. Back into these silent realms, where the great natural laws of evolution and dissolution move in a majestic sweep, there we shall find its causes and the means of relief.

Declaring the inebriate diseased and restraining him in special asylums for cure is not a new theory of modern times, but has been urged and discussed for over two thousand years. But, like all other great truths in the world's history, it has waited for an audience and a favorable time for acceptance. That time is rapidly approaching, and the principle is already recognized by an increasing number of scientific men in all parts of the country. The state of Connecticut has passed laws for the organization of such a hospital. Bills have been introduced in many of the state legislatures for this same purpose, but the opposition of moralists who still cling to the vice theory has so far prevented any practical work.

Empirics and charlatans, ever eager to profit by the half defined truths just dawning on the mental horizon, rush in with claims of secret specifics for the cure of inebriety, arousing enthusiasm among the poor victims and creating expectations that will only end in disappointment. This in itself is an unmistakable sign of the rapid growth and evolution of the real truth, which is now passing through the empiric stages.

We must have hospitals in every city and town for inebriates: First, for the paupers and criminals, the saloon loungers, and those who are constantly before the police courts for offenses of all kinds associated with excessive use of spirits. This class must be committed for five or ten years, or on indeterminate sentences depending upon their improvement and restoration, under certain conditions being permitted to go out on parole. Hospitals for their retention must be organized in the country, on large farms, where all the inmates should be required to work every day at some profitable em-

ployment, according to their capacity and strength. All the conditions of life and surroundings should be regulated with military exactness. All sources of debility and degeneration should be removed.

Nutrition baths, healthful surroundings, exercise, mental and physical remedies to build up and restore all the energies of the body, should be enforced. Rest, in the highest sense of change and growth, should be favored by every means known to science, and all acts and conduct should be under the control and guidance of others. Each man should be organized into the working force of the hospital, made a producer in some way, and kept in training not only for the purpose of self development, but also of increasing the value and usefulness of the institution. If he shows capacity, or can do more than become self supporting, the surplus thus earned should be credited to him or his relatives.

The possibilities are almost unlimited along this line. Vast numbers of inebriates, if they could be restrained from the use of spirits in such institutions and given medical care and work in the best conditions of health, would become active producers and support their families besides. After a long period of medical and institutional care and training, such cases would be restored, and in many cases become useful citizens. If after repeated trials on parole they should continue to relapse, their commitment should be permanent. The incurables would thus be placed in the least harmful and most humane and economical conditions of life. The present losses and contagions which follow this class would be prevented. The crime, insanity, pauperism, and disease centers which are always found associated with them would disappear.

Hospitals must be provided for a second class of persons who are not so far down the road to final dissolution. Inebriates who are constant drinkers or who have periodic excesses, and who keep up the delusion that they can stop any time and are not so bad as their friends represent—such persons are literally an army of exhausted, brain toppling drinkers, who are on the verge of insanity, crime, suicide, and sudden death. These should be committed to hospital care, the same as others. The same military control of exact obedience

and exact living—exact use of all means and appliances; every hygienic, physical, and mental remedy known—should be applied to build up and restore them to temperate living. The terms of confinement should be shorter, and the remedies suited to recent cases. Employment should be required of each one, and, if able, they should pay for their care in labor or otherwise.

A third class of hospitals would be required for wealthy and recent cases. The general plan would be as before: military care and training, with nerve and brain rest. The same special object would exist, to ascertain the conditions and causes which provoked the inebriety, and remove them; also to build up the entire man to resist and overcome these disease impulses in the future. To this can be added all the moral forces of prayer, faith, and conversion, together with every possible stimulation of the higher brain centers. The application of such remedies where the physical health and surroundings are the most favorable would be followed by the best results.

The study of inebriety in these hospitals would reveal many of the great underlying causes and laws which are active in producing this drink evil. The power and influence of the saloon and unregulated marriages would be seen and realized.

We have arrived at a period where all phenomena of loss, suffering, and evil must be regarded from a physical point of view. They are the results of tangible causes that may be known and understood. The drink phenomena and problem must be solved along this line.

If we consider the great evolutionary principles which underlie and control all these movements of individuals and races, this subject appears in a new light. All students of science understand that disease and degeneration, either inherited or acquired, come under the operation of great natural laws which may be studied and understood.

Degeneration, disease, and premature death are conditions that are preventable beyond the wildest dream of the enthusiast, but along lines that are yet to be discovered. Already the possibility of averting insanity, idiocy, criminality, pauperism, and other afflictions, looms up like the mountain

ranges of a new continent that is yet to be explored and mapped out. The armies of inebriates are the same degenerate, diseased victims, who become unfit, disabled, and sorely wounded, and are left on the field to die. In our ignorance we fail to realize this, and join in the delusion that they are

yet to do battle for civilization.

The laws of elimination go on crowding them out every where, and the losses and injuries they inflict on both the present and future generations are great obstacles to the survival of the fittest. Here nature is teaching the true remedy in the elimination and separation of those unfit, and hurrying them on to death by insanity, criminality, and various allied degenerations: the grinding, crushing battle of civilization; the struggle of man upward and outward, with its exposure, its strains and drains; its shot and shell, wounding, crippling, and disabling; and its force of hereditary injuries, coming from the past and reaching out into the future. This is the struggle along the front line, in which over a million of poor victims are engaged.

Nature separates, eliminates, and destroys. Science teaches that separation and isolation may be followed by restoration. The same laws and forces which accelerate dissolution may be turned into currents of evolution. This army of inebriates can be halted and forced back to the rear, and diverted into conditions of growth and development. Already the polluted springs of heredity and the recruiting stations of the saloons and unregulated marriages are apparent. Already there are in sight vast ranges of causes and conditions that can be utilized and sent into practical operation for the

prevention as well as the cure of inebriety.

TENEMENT HOUSE REGULATION.

BY ROBERT W. DE FOREST.

[Robert Weeks DeForest, lawyer; born New York, 1848; graduated Yale, 1870; admitted to New York bar 1871; general counsel since 1874, and vice president since 1902 of the Central railroad of New Jersey; president of the Charity Organization society since 1888, organizer of the first philanthropic pawn-broking establishment in America; chairman of the Tenement Commission of New York since 1900; president of the Municipal Art commission of New York, 1905.]

Copyright 1903 by American Academy of Political and Social Science

When Theodore Roosevelt, then governor of the state of New York, attended the opening of the tenement house exhibition of the Charity Organization society of New York, and looked over the models of tenements, old and new, and the charts which showed the close connection between the housing of the vast majority of that city's population and health, pauperism and crime, he said to the few of us who had organized this exhibition: "Tell us at Albany what to do, and we will do it." The result was the New York State Tenement House commission of 1900, the enactment last year of the most advanced code of tenement house laws as yet put in force in any American city, and the creation for the first time in this country of a department directly charged with the oversight of the construction and proper maintenance of tenement houses.

The tenement house problem we had to meet in New York was the most serious of any city in the civilized world; for in New York, according to the last census, out of 3,437,202 inhabitants, 2,273,079, or more than two thirds, lived in tenement houses, and there were 82,652 of these tenements in the

city.

The interest in this particular phase of the housing question is not confined to New York. No one who has followed, even carelessly, public opinion on this subject can fail to realize the hold it has upon the public conscience. It may be that some tremble at the effect upon their own fortunes of a possible social revolution, and seek to protect themselves, for their own sake, by trying to make what they call the lower classes more comfortable in their homes. But the large body of men and

Vol. 10-13 193 women in this country who are giving attention to this subject, are doing so from love of their fellow men, and an earnest desire to give them in their homes some of the healthful surround-

ings and comforts they enjoy in their own.

There are few large cities in America in which there is not some tenement regulation, and some agitation for its extension; nor is this activity confined to the larger cities. Kansas City in the west, Hartford in the east, Yonkers, Syracuse and Rochester in New York, are already moving in the same direction, and the subject is receiving close attention in Washington, Cleveland and Pittsburg.

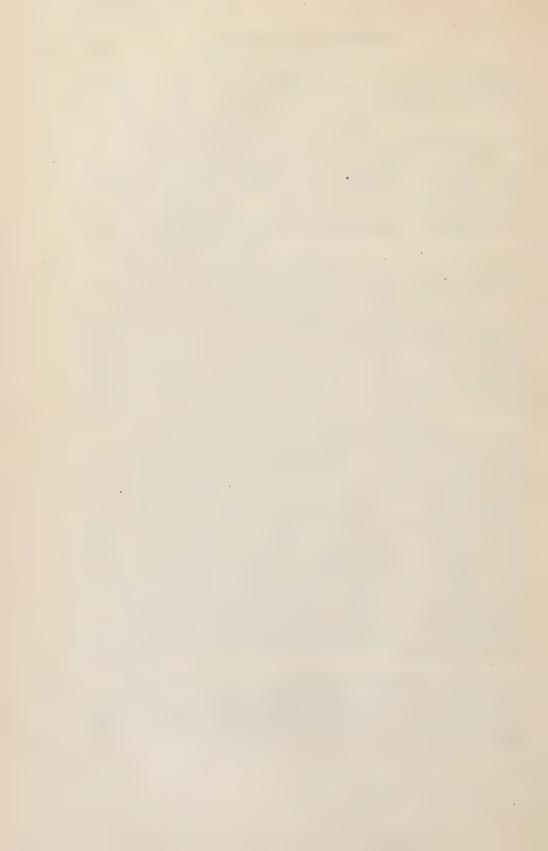
The New York law of last winter was a state law, applicable to all cities of the first class. It included Buffalo as well as New York, and Buffalo did its full part in securing the enactment of the law. Philadelphia is emphatically the city of homes, and not of tenements. Fortunately for Philadelphia, its working classes are almost exclusively housed in single family dwellings. It has, as most of you know, an admirable code of tenement house laws, which has proved very useful to us at New York in preparing ours, and it has its Octavia Hill

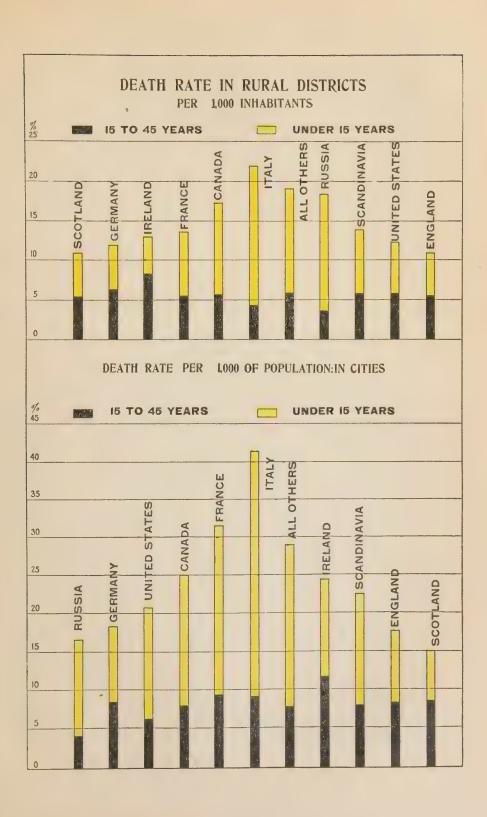
association to advance the cause of housing reform.

In some quarters benevolent people are proposing to build model tenements. That is good as far as it goes, but if at the same time other people, not benevolent, who have no motive but gain for themselves, are permitted to build tenements which are not models, the extent of progress is very limited. What we must do, first and foremost, is to secure proper legislation, using that term in its broadest sense, to include city ordinance, as well as state law. Legislation to regulate building, so as to secure for new buildings proper air and light space and proper sanitation; legislation to regulate, in buildings old and new, their maintenance so that health conditions may be improved and at least not be impaired; legislation, moreover, that provides the means for its own enforcement, by proper inspection.

Most of us have been brought up to believe that, as owners of real estate, we could build on it what we pleased, build as high as we pleased, and sink our buildings as low as we pleased. Our ideas of what constitutes property rights and what con-







stitutes liberty are largely conventional. They vary with time and place. They are different in different countries. Liberty, proper liberty, to-day, may, under changing conditions, become license to-morrow. I came home from Europe not long since with a French friend, who had gone home to his native country to take possession of his ancestral estates. He told me of having found the trees grown up quite thickly around his father's country home, and of the difficulties he had encountered in obtaining permission from the public authorities to cut down some of them, which was finally only granted on condition that he replant elsewhere. That his trees could only be cut down with the consent of the public authorities, and that he could properly be required to replant elsewhere as a condition of obtaining that consent, seemed to him a part of the eternal order of things. He no more questioned it in his mind than we, who live in cities, question the propriety of obtaining from the city building department a permit to build,

based upon approval of our architect's plans.

Lecky, in one of his later books, speaking of sanitary legislation, says: "Few things are more curious than to observe how rapidly, during the past generation, the love of individual liberty has declined; how contentedly the English race are committing great departments of their lives to the web of regulations restricting and encircling them." It is not that love of liberty has declined; it is that the English race are meeting new conditions with the same genius with which they have evolved their great system of common law. Living, as most of them did a century ago, in separate houses, and in small villages or towns, every man could build as he pleased and could maintain his building as he pleased without seriously endangering the liberty of his neighbors; but with the steady movement of the population from the country to the city, and the marvelous growth of cities, not only horizontally but vertically, new conditions must be met, and the property rights and liberty of one neighbor must be limited to protect the property rights and liberty of another. If a man built an isolated house in the country, without light or air for the bedrooms, and kept it in such filthy condition as to breed disease, it is a fair question whether his liberty should be infringed by any building or health regulation. He may be fairly left free to suffer the consequences of his own misuse of his liberty. His death, and that of his family, from disease so caused may, as an awful example, do more to advance civilization by making his neighbors more careful, than would his life and theirs under enforced sanitary regulation. But if that same man is separated from you and me only by a board partition or twelve inch wall, and our families meet every time they go into the street or into the back yard, his liberty must be restricted in some degree in order to enable you and me to enjoy ours.

How and why has tenement house law been evolved in American cities? In the same way in which the Anglo-Saxon mind deals with any such problems. Just as it evolved common law, and for the same reasons. First a case—that is, an evil—to be remedied; afterward a decision—the application of the remedy, and the establishment of a principle or law by which similar evils shall be remedied. It is not according to the genius of our race to provide the remedy in advance of the supposed disease. Better be sure that the disease really exists, even if some few die from it, and then provide the remedy which will be sure to meet actual conditions, than to burden the community with advance remedies for diseases that after all may prove to be imaginary. Even if the disease be not imaginary, such remedies are apt to be worse than the disease itself. Thus, in Anglo-Saxon countries, a conflagration has usually preceded precautions against fire, and the evils of sunless, airless and unwholesome tenements have preceded any attempt to prevent these deplorable conditions. Eventually we act, and when we do we act practically.

It may be well to define what is meant by a tenement house, for without definition there is infinite confusion in the use of this term. In one of the recent civil service examinations in New York, a candidate, evidently learned in the law, or supposing himself to be so, defined it as being "that which is neither land nor hereditament." It has its popular and its legal meaning. Popularly, it is used to designate the habitations of the poorest classes, without much thought of the number of families living under any particular roof. The National Cyclopedia significantly says: "Tenement houses, commonly

speaking, are the poorest class of apartment houses. They are generally poorly built, without sufficient accommodation for light and ventilation, and are overcrowded. The middle rooms often receive no daylight, and it is not uncommon in them for several families to be crowded into one of their dark and unwholesome rooms. Bad air, want of sunlight, and filthy surroundings work the physical ruin of the wretched tenants, while their mental and moral condition is equally lowered. Attempts to reform the evils of tenement life have been going on for some time in many of the great cities of the world.'

Legally, tenement is applied to any communal dwelling, inhabited by three, or in some cities four, or more families, living independently, who do their cooking on the premises. It includes apartment houses, flat-houses and flats, as well as what is popularly called a tenement, if only built to accommodate three, or as the case may be, four or more families who cook in the house. It is in its legal sense that I use the term. At first blush it may seem objectionable to class apartment houses, flat-houses and tenements, so-called, together, and subject them to the same code of regulation. Practically, it has never been possible to draw any line of separation between different houses which are popularly designated by these different words. Nor has any one ever suggested any regulation proper for the poorest tenement, using the word now in its popular sense, which would not be voluntarily, and as a matter of self interest, complied with in the most expensive apartment house. Nor is there any certainty that what to-day is popularly called an apartment house may not to-morrow, in popular parlance, be a tenement of the worst kind. My own grandmother, within my own recollection, lived in what was then one of the finest houses in one of the most fashionable streets of New York. Not long since I passed the house, and noticed on the front door a sign reading, "French flats for colored people."

In its earliest form (and many cities have not yet passed beyond the first stage) the tenement was a discredited private house or other building, not originally built for the occupation of several families, but altered for the purpose. Each floor of what was originally a private dwelling was changed so that it could be occupied by a family. Later on—it may be at the beginning—each floor was subdivided between front and rear, so that it could be occupied by two families. One of the chief evils of such tenements arose from cellar occupation, and consequently some of the earliest tenement house regulations re-

late to the occupation of cellars.

In its second stage the tenement house is built for the purpose, imitating, not infrequently, in a servile manner, the arrangement of the altered house, with its dark rooms, and only gradually being adapted to a new architectural form growing out of its special use. The introduction of running water and city health regulations made it possible and desirable to locate water closets inside. Courts and air shafts increased in size. Fortunately, the process of evolution is not exhausted, and is

still going on.

The tenement is still regarded in many places as an exotic, not adapted to our climate. But, judging from the history of New York and other cities, west and east, the tenement house has come to stay, and is, perhaps, destined to crowd out other and better forms of housing. I remember well when the first tenement to be dignified by the term apartment house was built in New York. It was in the early 70's. Now it is a prevailing type of new building for dwelling purposes on Manhattan island. There were no less than 82,652 tenements in Greater New York at the time of the last census. The development of the tenement has been largely influenced by legislation intended to prevent its worst evils. To test the reason for such legislation, and to define its limitations, a brief summary of particular subjects of regulation is desirable.

Protection against fire is almost universal. Structural provisions directed to this end are contained in the building laws of all cities. In New York, Philadelphia, San Francisco, Jersey City, Providence, Syracuse and Nashville, all tenements must have fire escapes. All tenements over two stories in height must have fire escapes in St. Louis, Baltimore, Louisville, Minneapolis, St. Paul, Denver, Toledo and Columbus. In Chicago, Cleveland and Cincinnati, this rule applies only to tenements over three stories in height. In many cities tenements must be fireproof throughout when over a certain height.

In Philadelphia this is true of all over four stories; in Washington of those over five stories; in New York, Buffalo, Louisville, Minneapolis and Denver, of those over six stories in height. In Boston, the limit is 65 feet.

Light and ventilation are protected by minimum open spaces. In Philadelphia there must be open spaces at the side or rear equal to one fifth of the lot area, and the minimum width of all spaces is eight feet. In Buffalo, under the local law in force before the general state act of 1901 was passed, the minimum width of any outer court was six feet in two story buildings, eight feet in three and four story buildings, and one additional foot in width for each additional story. The minimum interior court was eight by ten. In Boston, a clear open space at the rear must be left equal to one half the width of the street on which the tenement fronts, and there must be two open spaces at least ten feet wide. In some cities the required court area is expressed in square feet, without regard to minimum width or length, and increases proportionately with the height of the building. This principle is adopted in New York, where the minimum width of exterior courts in buildings five stories high is six feet on the lot line and twelve feet between wings, and the minimum area of interior courts on the lot line in buildings of the same height is twelve by twenty four, reduced this winter in three story tenements to eight by four-Such buildings must have an open yard at least twelve feet wide in the rear. The height of rooms is almost universally regulated, the minimum usually being eight feet. height of tenements is limited in many cities.

Water supply is prescribed. In New York, water must be furnished on each floor. In Philadelphia and Buffalo, on each floor, for each set of rooms. In Boston, Chicago, Jersey City and Kansas City, in one or more places in the house or yard.

Water closet accommodation is very generally prescribed. In Philadelphia, and in New York under the new law, there must be one for every apartment. Under the old law in New York, and at present in Chicago and Detroit, there must be one for every two families. In other cities the unit is the number of persons. It is twenty persons in Boston, Baltimore and Denver; ten persons in Rochester.

The reasons for tenement regulation may be roughly classed as follows—precise classification is impossible, as it is seldom that any particular regulation is attributable solely to

a single reason:

The protection of property rights in adjacent property. Such is the reason for regulations requiring fireproof construction in whole or in part. Such is the chief reason for limitations of height and for leaving an obligatory open space at the rear of each house so as to preserve thorough ventilation for the block. The protection of neighbors and the community from unsanitary conditions by which they might be affected, or which might breed contagion. Under this class falls the great body of sanitary law and tenement house regulation of a sanitary kind. That all legislation which falls within these classes can be justified as a proper restraint on the liberty and property rights of some, in order to protect and preserve the

property rights and liberty of others, is clear.

There is another and increasing class of regulations intended to protect the life and health of those who can not, it is supposed, protect themselves by any means within their control. Fire escapes, which are almost universally required by law in nonfireproof tenement houses, belong to this class. There is no such regulation for private houses, and there is usually no such requirement for two-family houses. reason for the fire escape in tenements and hotels must rest either on the supposed inability of the inmates to protect themselves, as the owner of a private house can protect himself and his family, or else from the greater number of persons exposed to risk. Of such class also is the law providing that there be a separate water closet for each apartment, as in New York, or for every two families, as in Detroit and elsewhere, and that lights be kept burning in public halls at night. No such regulations exist for private houses. They can be only justified in tenement houses on the theory that the tenants in such houses must live in them, can not control their maintenance in these particulars, and are entitled to the protection of affirmative law for these necessities or conveniences. It may be answered that they need not rent rooms in houses not furnished with separate water closets, and the halls of which are not kept lighted, unless they wish to, and that they should not be restricted in their liberty to rent rooms in such houses, it may be at a lower rent, if they so desire. The reply may be, and in some cities would properly be, that they would have no choice unless the law intervened to protect them. Moreover, it might be urged that in the provision for separate water closets for each apartment, and in the lighting of public halls, there was an element of protection to public health and morals in which the community had an interest, and which the com-

munity by regulation should insure.

I have sought by these illustrations to point the closeness of the dividing line between justifiable restriction of the individual liberty of the house builder and house owner, for the protection of the liberty of others, and paternalism. It is undoubtedly true, as Mr. Lecky states in the concluding part of the paragraph to which I have already referred, that "the marked tendency of these generations to extend the stringency and area of coercive legislation in the fields of sanitary reform is one that should be carefully watched. Its exaggerations may, in more ways than one, greatly injure the very classes it is intended to benefit." There is real danger lest in our eagerness and earnestness to improve the condition of others, we legislate from the point of view of those fathers and mothers who are always ready to regulate the affairs of every family but their own, and break down the habit of self dependence and the spirit of individual responsibility upon which the vigor of our American social fabric so largely depends.

Perhaps the most important limitation to tenement house reform, in the construction of new tenements, is the question of cost. If tenements can not be rented at a profit, they will not be built. There are many things which it would be desirable to have in a tenement, each one of which adds to its cost; and if they be required by law to an extent which makes it unremunerative, tenement building will cease. It is undoubtedly desirable that all tenements should be fireproof throughout; indeed, the same may be said of private houses. In 1892, Boston so prescribed; but few, if any, were erected, and the

law was consequently modified in 1899.

The amount of rent which the average American working-

man in any particular city can pay approximates a fixed quantity. Any legislation which materially increases this rent, or which prevents building and therefore prevents his finding shelter, is quite certain to be repealed. This proposition, however, is not so discouraging as it may appear at the The standard of living among our working classes is steadily improving. What yesterday was a luxury, to-day is a necessity. In many cities, apartments which are not provided with running water are unrentable. Bathing facilities are increasingly in demand, and are frequently being provided. Families that have once lived in apartments where the bedrooms have light and air, will not hire apartments which are dark and unventilated. The supply must meet the demand. Interest rates are receding; economies in construction are being introduced, which some time ago were unknown, largely by the building of houses by the wholesale. The large profits which were demanded as the normal income on tenement houses in the past are no longer expected. Rooms up to the standard of the modern tenement house law can be provided without increasing the rental.

Another limitation in many cities is the prevailing lot dimension. If Dante were to-day writing his Inferno, the lowest depth would be reserved for those men who invented the twenty five foot lot and imposed it on so many American cities. In unbuilt districts, where several lots, whatever be their dimensions, can be purchased and built upon together, the lot dimension does not necessarily control the frontage of the building, and the tendency in such districts in New York is to build tenement houses of wider frontage, which admit of better court arrangement, but there are usually so many lots separately owned, and so many which are situated between lots already built upon, so that their enlargement is impossible, that any proposed legislation prescribing court areas which, however desirable, puts the prevailing lot unit at a disadvan-

tage, will meet with overwhelming resistance.

There is another practical limitation, not necessarily to the enactment of tenement house law, but to its permanence, in the extent to which it, either actually or supposedly, interferes with the profits of builders and material men; and perhaps no

better illustration of this practical limitation can be given than a simple recital of the contest over the radical amendment of the New York law which was waged at Albany. The New York law of 1901 marked the longest step in advance that tenement house reform in that state has ever taken, though in its provisions for court areas, the particular point in which it was assailed, it does not go so far as the Philadelphia law, and but little further than the previous Buffalo law. It unquestionably increased the cost of construction by its fireproof provisions, as well as, though in a less degree, by its larger court areas. That there would be organized effort on the part of building and real estate interests to modify it was certain and inevitable. Many bills were introduced amending it, but my illustration only concerns two,—the city administration bill, in the preparation of which I myself had part. and a bill introduced by a Brooklyn member of the legislature in the interest of Brooklyn builders and material men. who claimed that they represented the people of Brooklyn. One of the prevailing types of Brooklyn tenements is a three story house on a twenty five foot lot, with two families on a floor, making six families in all, each apartment running through from front to rear. These houses had been built with interior courts or air shafts about two and a half feet wide and ten feet long. These light shafts were supposed to light and ventilate the interior rooms of each apartment. As a matter of fact, they furnished little light or ventilation to any bedrooms below the top floor. The same type of air shaft in taller tenements of Manhattan was one of the chief evils against which the new law was directed. These evils were undoubtedly less in a three story building, but still existed. The minimum interior court or air shaft permitted by the new law in such buildings was eleven feet wide by twenty two feet long. Such a court prevented the building of this type of house, and no tenements of this type were consequently built on twenty five foot lots from the time when the law went into effect. The Brooklyn bill sought to amend the law, as respects three and four story houses, by permitting a return to the old air shaft, with an increased width of six inches, and with a somewhat increased

length, making it three by twelve. We conceded that under the law it was impossible to build this particular type of tenement on a twenty five foot lot, with each apartment running through from front to rear, but we demonstrated that it was perfectly practicable to build what seemed to us a much better two families on a floor tenement on such a lot, by putting one apartment in the front and another in the rear; that it was perfectly practicable to build, under the law, apartments running through from front to rear on a somewhat larger lot, and that the law interfered with no other current type except the one in question. The separate front and rear apartments, which were practical under the new law, are usual in Manhattan, and the rent obtainable from the front apartment differs but little from that obtainable from the rear apartment. Brooklyn insisted that though Brooklyn was a borough of New York and only separated from Manhattan by the East river, Brooklyn people were so accustomed to apartments running through from front to rear that they would not rent rear apartments, and indeed, that the social distinction between families who could afford to live in the front apartment, and those who would be forced to live in the rear apartment, was so great that they would not rent apartments in the same house.

This proposition may seem strained, but we of the city administration were finally satisfied that so much regard should be paid to local habits and customs, that it was wise to modify our minimum court areas in three story houses to such a point as would permit the building of this particular type of Brooklyn house. Plans were then made which demonstrated beyond peradventure that by reducing the minimum court area to 8x14, instead of 3x12, this particular type of house could be built, with bedrooms infinitely better lighted and better ventilated than those opening upon the narrow shaft. One would have supposed that this improved plan, which permitted Brooklyn builders to construct a front to rear apartment, for which they claimed so many advantages, would have been received with acclamation as a solution of the difficulty. Not at all. Some insisted that Brooklyn must have what it was accustomed to, narrow air shaft and all. Others more openminded, while frankly admitting that the new plans made better apartments, which should bring in an increased rental of from fifty cents to a dollar a month, insisted that tenants would not pay more rent, and that because the buildings under these new plans cost say \$800 per house more than under the old plans, they would not be commercially profitable, and therefore would not be built. Not a word was said as to the interests of tenement dwellers. There was no dearth of apartments in Brooklyn at current rents. Indeed, the supply was far beyond the demand. The whole issue turned on the commercial profitableness of building under the law, as amended by the city administration bill, to meet this Brooklyn con-The Brooklyn builders were perfectly frank in their arguments. They started with the premise that the building of tenements in Brooklyn must be made commercially profitable; that buildings under the new plan, with a minimum court area of 8x14, would not be commercially profitable, because about \$800 was added to their cost, and therefore insisted that the law should be amended to meet their ideas of commercial profitableness. That the purpose of the law was not to promote building operations, or increase the value of real estate, but to provide healthy habitation for tenement dwellers, and that that purpose was certainly being accomplished under the new law so long as tenement dwellers could house themselves without any increase in rent, was ignored, nor if it had been urged, would it have seemed to them an argument worth considering.

I am happy to say that they did not succeed, but they demonstrated the influence which can be exerted upon the average legislator by men of their type through their trade and allied labor organizations; and had those who, at the moment, represented the unorganized public in the cities been less active, and had the force of public opinion as voiced by the press been less outspoken, the result might have been different.

The advance of tenement house reform undoubtedly means some diminution in the profit of the landlord, or some increase in rent. Improved tenements must cost more. Some one must pay that cost. If any material rise in rents would produce such opposition to the law as to repeal or modify it, then either the cost must be borne by the landlord, or

the law must be modified. Whether the landlord's rent will by the law proposed in any city be diminished below the point of legitimate profit, can not be certainly demonstrated until the experiment be tried. Some enlightened landlords, with a sense of their obligations toward their tenants, are perfectly willing to suffer this small diminution of income. Others are not, and the others, who usually constitute the majority, in alliance with the builders and material men, will always seek to prevent legislation which affects their pockets. Tenement house reform must always be militant, not only to gain ground,

but to hold the ground that has once been gained.

There is something for almost every one to do. Let none suppose that our cities, however small, will remain free from the evils of the tenement house, which in larger cities has necessarily evolved in self protection tenement house regulation. The tenement has come to the United States, like the Canada thistle, to grow and to multiply. The smaller cities need not go through the bitter experience which is teaching New York and other cities their lesson. They can, by timely regulation, prevent the crystallization of unsanitary conditions into brick and mortar. I do not recommend the adoption in every city of the New York law. It was framed to meet the special conditions there existent. The remedy should be no greater than the prevailing or expected disease warrants. A few elementary regulations with regard to court areas, vacant spaces, and regular and official inspection to make certain that these simple regulations are followed in construction and that ordinary sanitary rules are complied with in maintenance, will suffice, if there always be a keen eye to look some years ahead, to meet future needs before they make themselves unpleasantly manifest in your own surroundings, and before conditions are created, as in New York, which can not be changed except at great cost to owners and to the municipality.

RACE SUICIDE IN THE UNITED STATES.

BY WALTER F. WILCOX.

[Walter F. Wilcox, expert special agent of the United States government appointed to investigate the fluctuations in the birth rate, has conducted other important inquiries for the department of commerce and labor; upon his graduation from college he began a series of studies of social problems securing his facts by original research, and his published reports of his investigations into municipal conditions, and the life of the working classes have attracted wide attention.]

The increase of a population aside from immigration depends not merely on the number or proportion of infants annually contributed to recruit or swell the ranks of the population; it depends also on the number successfully reared. The enumeration of children under 5 years of age is admitted by every one to be far more accurate and complete than the enumeration of children under 1 year of age. The proportion of children is thus an approximately accurate and a significant clue to the amount of new blood that is being brought into the country by nature's processes of reproduction and growth. Even if the enumeration of adults is substantially complete and that of children far from complete, no valid ground has been shown for believing that the per cent of omissions among children differs widely from census to census. Each census is organized more efficiently than the last and gathers its information from a better educated, less suspicious, and more friendly population. Hence such omissions should and probably do tend to become relatively less frequent. In that case the reported number of children would increase from census to census faster than the actual number, and the tendency of such a gradually disappearing error would be to mask rather than to exaggerate the real decline in the proportion of children.

It is a debatable question whether the population with which the number of children is compared should be the total population, the adult population, the women of child bearing age, or the married women of child bearing age. Each method has its advantages. The proportion to the total population can be computed for a longer period than any other, and hence is better adapted for a preliminary survey of the general trend.

But for most purposes a comparison with the number of women of child bearing age seems the best. The number of married women of child bearing age is known only for 1890 and 1900. Partly for this reason, partly because many of the influences tending to decrease the birth rate tend also to decrease marriages, and partly because limiting the comparison to married women excludes the influence of illegitimacy, the comparison between children and married women should be used

only in a subsidiary way.

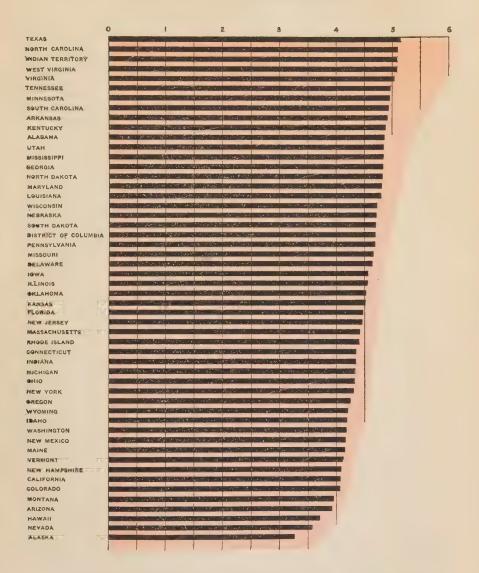
The number of children under 5 years of age and also the number of women of child bearing age in the total population have been reported by the censuses only since 1850; the number of children under 10 years of age has been reported by censuses since 1830. Accordingly, an accurate statement of the proportion of children under 10 years of age to the total population can be made for the last seventy years of the nineteenth century. For 1800, 1810, and 1820 the number of free white children under 10 years of age was given, and for 1820 the number of free colored and slaves under 14 years of age. From this information an effort has been made to estimate approximately the total number of children under 10 years of age at each of these earlier censuses by aid of the assumption that as the negro population under 14 years of age in 1900 is to the negro population under 10 years of age in 1900, so is the negro population under 14 years of age in 1820 to the negro population under 10 years of age in 1820. For 1800 and 1810 the free colored and slave population under 14 years of age has first been estimated from the total free colored and slaves of all ages by assuming that the proportions of 1820 applied, and then from these estimates the free colored and slave population under 10 years of age has been estimated as in 1820. It is admitted that the results are only approximate, but it must be remembered that these estimates applied to only one sixth of the entire population under 10, five sixths of it being given by direct enumeration.

No census can furnish all the information needed to compute the birth rate or number of births in a year to each thousand persons, nor has this information been obtained for the United States, or any considerable part of it, by any other





AVERAGE NUMBER OF PERSONS TO A PRIVATE FAMILY BY STATES AND TERRITORIES



AVERAGE NUMBER OF PERSONS TO A FAMILY FOR THE UNITED STATES: 1850 TO 1900





agency. The attempts to approximate the birth rate on the basis of census figures have been far from satisfactory. As a result the birth rate in the United States, past or present, is unknown.

The ratio of the living children under 5 years of age to each 1,000 living women of child bearing age is used as the best available substitute for the birth rate during the last half of the nineteenth century.

The proportion of children under 10 years of age to the total population can be ascertained for a longer period. It has decreased almost uninterruptedly since the early part of the century, the number of such children constituting approximately one third of the total population at the beginning of the century and less than one fourth at the end. The decrease in the corresponding proportion for whites began as early as 1810 and continued uninterruptedly to the end of the century.

Since 1830, when the figures were first obtained, the proportion of negro children under 10 years of age to the total negro population has decreased. There was, however, an increase from 1860 to 1880. On the other hand, there was a rapid decrease from 1880 to 1900. The proportion of white children under 5 years of age to the total population decreased steadily, except from 1850 to 1860, the number of such children being in 1900 about three fifths of what it was in 1830. The decrease during the last decade of the century was insignificant. The corresponding proportion for negroes was at its height in 1850 and 1880 and except for 1870 was least in 1890.

The decades of great immigration and the Civil war showed the greatest ratio of decrease in the proportion of children. The decades immediately following those of great immigration showed a reduction in the rate of decrease, probably because of the high birth rate among the immigrants. The reduction in the proportion of children to total population during the century suggests but does not prove that the birth rate was lower. The increase in the proportion of children among negroes from 1860 to 1880 and the decrease from 1880 to 1900 suggests a high birth rate during the twenty years following emancipation and a rapid fall in the birth rate thereafter.

The proportion of children under 5 years of age to women of child bearing age increased from 1850, to 1860, but has decreased since then, being in 1900 about three fourths of what it was in 1860. The decline in the proportion of children since 1860 has been less marked in the south than in the north and west. The proportion in the north and west in 1850 was about five sixths and in 1900 less than three fourths of that in the south.

In 1900 the maximum proportion of children was in North Dakota and Indian Territory, where children under 5 years of age were about two thirds of the number of women. In 1890 the maximum was in North Dakota and Idaho.

In 1900 the minimum number of children was in the District of Columbia and California, being about one third of the number of women. In 1890 it was in the District of

Columbia and New Hampshire.

In 1900 there was a band of states from Maine to California in which the proportion of children was below 500 to 1,000 women. This band was broken by Utah, where the influence of the Mormon church was felt. Except for Kansas the proportion for these states was below that for continental United States.

In 1890 the regions in which the number of children was

less than one half the number of women were separated.

In the north Atlantic states, and in Virginia, West Virginia, North Carolina, Oklahoma, Montana, New Mexico, and Nevada the proportion of children increased between 1890 and 1900. The increase in the north Atlantic division was probably due to the high birth rate among the immigrants that entered from 1880 to 1890. In Maryland, Kentucky, Michigan, Ohio, Illinois, and Indiana the proportion of children has decreased steadily since 1850. The decrease for the country during the past decade was due in the main to the controlling influence of the states west of the Alleghenies. From 1850 to 1880 the low proportion of children in New England and the high proportion in some of the western states, especially those under Mormon influence, were striking. The proportion of white children was high in the south, showing that the pro-

portion for negro children was not the controlling factor in the proportion for the total population.

In many of the states, particularly most of those in the Atlantic divisions, the relative number of white children increased from 1890 to 1900. The largest proportion of negro children was found in 1880 and the smallest in 1900, being only about three fourths of that in 1880. The proportion for negroes was uniformly larger than that for white. As compared with whites in the south, there was for negroes an excess, reaching a maximum in 1880, at every census except 1900, when there was an excess for whites.

The proportion of children in cities was about two thirds of what it was in the country in 1900. In the north there was little difference in the proportion for city and country. In the south the proportion in cities was hardly more than half as great as that in the country. In the west the ratio of the proportion for city and country was between the two extremes.

In 1900 the proportion of children in the country was about one sixth greater for the colored population than that for the white. In cities the proportion of children among the whites was more than one half larger than that among the colored. It may be that the mortality among negro children in the city is high, as generally the birth rate is higher than for whites.

The proportion of children for each race was low in southern cities. From 1890 to 1900 the decrease in the proportion of children was much greater for the non-Caucasian than for the white race.

At the beginning of the nineteenth century children under 10 years of age constituted one third and at the end less than one fourth of the population. A decline in the proportion of children began as early as the decade 1810 to 1820, and continued almost uninterruptedly but by very different amounts until 1900. The average decrease has been about 1 per cent in a decade. The greatest decreases occurred in the decades 1840 to 1850 and 1880 to 1890. This was probably due to the enormous immigration which swelled the adult population with great rapidity. For the decade 1880 to 1890 this factor may have been reinforced by the change in the form of the

age question, although the influence of this upon the number of children under 10 is uncertain. The next largest decrease was in the decade from 1860 to 1870, when the direct and indirect effects of the Civil war reduced the proportion of children. But this decrease was accentuated by the serious omissions of that census, especially in the southern states and among the negroes, for whom the proportion of children is very high.

Statistics as a whole suggest that there has been an almost uninterrupted but irregular decrease in the birth rate from near the beginning of the nineteenth century. They do not prove this, for the decrease might be explained by the increasing vitality of the population, leading to a longer average duration of life and consequently the survival of a larger number of

adults.

The method of estimating the proportion of children, by comparing them with the number of women of child bearing age, may be applied for the period 1850 to 1900. This method has two advantages over the preceding. It makes it possible to limit the children to those under 5 years of age and to exclude from the second term of the comparison all males and the females not of child bearing age. Under these conditions any decrease in the proportion of children which the figures may show could not be explained as due to the increased vitality and longevity of the adult population. The limits of childbearing age are usually assumed as 15 and 44, but for the censuses the limits must be taken as 15 and 49.

The proportion of children increased from 1850 to 1860, and then decreased without a break but by very unequal amounts. The slight decrease from 1870 to 1880 was probably due in part to serious omissions in 1870 among the population having a large proportion of children. The slight decrease from 1890 to 1900 was probably due in part to the great prosperity of the country between 1890 and 1900, especially in the last years of the decade, in part to the many children born to the millions of immigrants of the preceding decade, and in part also to the change in the form of the age question.

In 1900 there were only three fourths as many living children to each 1,000 potential mothers as in 1860. The assumption that there has been a progressive increase in the inaccu-

racy of the censuses leading to omissions of larger and larger proportions of children is too improbable for serious refutation, and yet no other alternative can be suggested by aid of which to escape the conclusion that the birth rate has declined per-

sistently since 1860.

It is beyond the scope of the present discussion to examine the causes of this decline in the birth rate. But one suggestion, made by the superintendent of the censuses of 1870 and 1880, Gen. F. A. Walker, and supported by statistical evidence, seems to call for mention here. General Walker pointed out that the decline in the rate of increase of the American population (and so the decline in the birth rate) began with the rapid influx of immigrants. The following quotations give the gist of his contention:

"As the foreigners began to come in larger numbers, the native population more and more withheld their own increase. Now, this correspondence might be accounted for in three different ways: (1) It might be said that it was a mere coincidence, no relation of cause and effect existing between the two phenomena. (2) It might be said that the foreigners came because the native population was relatively declining—that is, failing to keep up its pristine rate of increase. (3) It might be said that the growth of the native population was checked by the incoming of the foreign elements in such large numbers. * * *

"The true explanation of the remarkable fact we are considering I believe to be the last of the three suggested. The access of foreigners at the time and under the circumstances constituted a shock to the principle of population among the native element. That principle is always acutely sensitive, alike to sentimental and to economic conditions. And it is to be noted, in passing, that not only did the decline in the native element, as a whole, take place in singular correspondence with the excess of foreign arrivals, but it occurred chiefly in just those regions to which the newcomers most freely resorted."

General Walker concludes: "If the foregoing views are true, or contain any considerable degree of truth, foreign immigration into this country has, from the time it first assumed large proportions, amounted not to a reinforcement of our population, but to a replacement of native by foreign stock. That if the foreigners had not come, the native element would long have filled the places the foreigners usurped, I entertain not a doubt."

Whether the evidence warrants the opinion that the decrease in the birth rate is due mainly to immigration of alien stock must be left to the student to decide. But one may mention that the recent decline of the birth rate in Australia has given rise to grave anxiety and led to the appointment in New South Wales of a governmental commission for its investigation. No torrent of alien immigrants has been flooding Australia, and yet the decline of the birth rate has probably been as rapid there as among native American stock.

It may be in place to introduce here for comparison with the opinion and the argument of General Walker the weighty words of Dr. John Shaw Billings. Toward the close of the article already cited, after he had developed conclusions in substantial agreement with those reached by a different method in the preceding analysis, he advanced from a purely statistical discussion to consider the causes of this decline in the

American birth rate.

"Does this diminution in birth rates indicate a progressive diminution in fertility, in the power of either or both sexes to produce children? There is no good reason for thinking so. It is true that it has been suggested that alcohol, tobacco, and syphilis are producing a deterioration of races which is in part responsible for the change, but of this there is no evidence. So far as we have data with regard to the use of intoxicating liquors, the fertility seems to be greatest in those countries and among those classes where they are most freely used.

"Is the lessening birth rate due to changes in the mode of life of the people, such as the progressive increase of migration from the rural districts to the cities, the increase of wealth and

luxury, the so-called emancipation of women, etc.?

"No doubt these things have some influence, by diminishing the proportion of marriage at comparatively early ages, and by favoring an increase in divorce and in prostitution, but it is probable that the most important factor in the change is the deliberate and voluntary avoidance or prevention of child

bearing on the part of a steadily increasing number of married people, who not only prefer to have but few children, but who know how to obtain their wish. The reasons for this are

numerous, but I will mention only three.

"The first is the diffusion of information with regard to the subject of generation by means of popular and school treatises on physiology and hygiene, which diffusion began between thirty and forty years ago. Girls of 20 years of age at the present day know much more about anatomy and physiology than did their grandmothers at the same age, and the married women are much better informed as to the means by which the number of children may be limited than were those of thirty years ago. To some extent this may also be true as regards the young men, but I do not think this is an important factor.

"The second cause has been the growth of the opinion that the abstaining from having children on the part of a married couple is not only not in itself sinful, or contrary to the usual forms of religious creeds, but that it may even be under certain

circumstances commendable.

"The third cause is the great increase in the use of things which were formerly considered as luxuries, but which now have become almost necessities. The greater temptations to expenditure for the purpose of securing or maintaining social position, and the correspondingly greater cost of family life in what may be called the lower middle classes, lead to the desire to have fewer children in order that they may be each better provided for, or perhaps, in some cases, from the purely selfish motive of desire to avoid care and trouble and of having more

to spend on social pleasures.

"In the struggle for what is deemed a desirable mode of existence at the present day, marriage is being held less desirable, and its bonds less sacred, than they were forty years ago. Young women are gradually being imbued with the idea that marriage and motherhood are not to be their chief objects in life, or the sole methods of obtaining subsistence; that they should aim at being independent of possible or actual husbands, and should fit themselves to earn their own living in some one of the many ways in which females are beginning to find increasing sources of remunerative employment; that

housekeeping is a sort of domestic slavery, and that it is best to remain unmarried until some one offers who has the means to gratify their educated tastes. They desire to take a more active part than women have hitherto done in the management of the affairs of the community, to have wider interests, and to live broader lives than their mothers and grandmothers have done.

"It is a strong argument against this theory of the causation of the lowered birth rate for this country, that the greatest diminution in the rate has apparently occurred in the agricultural states, and especially among the colored population in the south. It appears to be probable that this greater diminution in these states is due, to some extent at least, to greater errors in the data from which the rates are calculated, both in the count of the living infants and in the returns of the born and died during the year. It is also probable that voluntary prevention of conception had been far more common in the northern and eastern states for a number of years preceding 1880 than it was in the south, but that after 1880 it has increased in the south, producing a relatively greater effect in reduction of rates, although the absolute rates are still decidedly higher than they are in the New England states.

"If this view of the case is correct, the birth rate will not only continue low in the United States as compared with former years, but it will probably become lower. On the other hand, so long as the present tendency of the people to aggregate in cities continues, as it is likely to do until our coal supplies begin to shrink perceptibly, with a corresponding increase in the cost of power for purposes of manufacture and of transportation, so long the death rates are likely to increase, and, therefore, the rate of increase in population due to excess of

births over deaths will diminish. * * *

"This state of things has occurred before in the world's history in certain regions, as, for instance, in southern and western Europe during the decline of the Roman empire; and if the increase of population has not been checked, as it then was, the world would now be overcrowded.

"It does not appear to me that this lessening of the birth rate is in itself an evil, or that it will be worth while to attempt to increase the birth rate merely for the sake of maintaining a constant increase in population, because to neither this nor the next generation will such increase be specially beneficial. But considered as one of the signs of forces which are at work to modify the existing conditions of society, and some of which appear to be of evil tendency, this diminution of the birth rate merits careful consideration by statisticians, sociologists, politicians, and all who are interested in the physical and moral well being of the inhabitants of this country."

The evidence that has developed and come to the knowledge of the writer since this article was written has strengthened his belief in the substantial accuracy of the foregoing statement. But in this field the measuring rod of statistics will find little application until the vital statistics of the United States are more perfectly developed.

AMERICAN WOMEN IN PHILANTHROPY.

BY MAY WILKINSON MOUNT.

[May Wilkinson Mount is a well known contributor to the magazines chiefly on the progress of the movement for the advancement of women, but also on philanthropic and charitable work, although more especially that in which women are engaged; her home is in New York, and she is prominent in the movements for the betterment of the conditions of the masses.]

Women take to philanthropy kindly—oftentimes vehemently, with the consequence that they frequently miscall the object of their endeavors and mistake the true for the false, thus producing as an offset to every one philanthropist nine hundred and ninety nine philanderers. This effect of woman's exertions in the cause of philanthropy may be ascribed to the centripetal forces of her nature and habits—a force acquired by centuries of cultivation, or the lack of it, and only reactionary in this age when women have been in a position to retrieve their own destinies and to put into practice concentration of mind and centralization of methods.

It is especially fitting that the new republic of the west, whose national shield is held by a woman, should be the scene of the greatest development and progress of women in the field of philanthropy. Here came the Sisters of Mercy from Newfoundland, where, at the beginning of this century, they suffered painful hardships in their work—both charitable and educational—among many tribes of Indians, of whom the Cherokees were most numerous, and whose tribal feuds furnished not the least part of their perils and called into action an ability to cope with affairs requiring the tact of a diplomat and a power of control equivalent to that of an armed force.

Philanthropy and charity in the Christian sense mean the same thing—love of fellow men; but in time the terms became differentiated until to-day philanthropist conveys to the average mind one who serves his neighbor in the way of helping him to help himself, and so reach a high standard of manhood; and charity means the giving away of one's substance to relieve a person in need. An act of philanthropy is progressive; it

sets in motion machinery which goes on and on turning out wiser, or better, or healthier men and women. An act of charity ends with the deed. It may or may not bring forth the fruit of gratitude and higher endeavor, and is only progressive in its results when its magnitude merges it into the domain which the world terms philanthropy. As an illustration: the thousands of dollars contributed by Miss Helen Gould to the hospitals might be termed a charity; her check of \$100,000 to the government was an act of philanthropy—it went to help free a people and immediately better their physical and moral conditions. This country contains millions of notably charitable women, because women by reason of their nature and occupation can best swell the roll of charity.

With very few exceptions the work of women in New York has been the inspiration of those in other cities, and its results models for others to imitate. The first sustained effort made in New York by a woman to enable other women to help themselves was the establishment, by the late Mrs. Marshall O. Roberts, of the Ladies' Christian Union home, on Washington Square, in 1858. This house lodged girls who were strangers in the city, and helped them to find employment. As the work grew, instruction of various sorts was added until, in its ripe age, the Young Woman's Christian association spread butterfly wings from the chrysalis of the old house in Washington Square, and took the industrial and educational work into a new sphere of activity. Thousands of women have reaped its benefits who had no means to secure instruction elsewhere, nor ability to obtain the employment which such an education fits them for.

Mrs. W. B. Skidmore tells of the beginning of the Ladies' Church Union. In those early days the ladies had no pattern to follow, and "we had to devise everything for ourselves," she says. The work was begun and continued in prayer before definite action was decided upon; and so unused were they to vocal prayer that Mrs. Skidmore says, "I well remember halting in a corner lest I be asked to pray." The little band of women began by visiting factory girls and women in tenement houses, and then opened their home on Amity Place. "At first it was hard to find a person to manage such a household," said Mrs.

Skidmore, "for the quarrels among the kind of domestics we could then afford brought the police officers to the door with the remark that they did not know how to settle the troubles of these Christian women!" Mrs. Roberts called and led the first great prayer meeting of women in New York, that mothers of the seventh regiment might pray for their sons who had left for service in the Civil war; while, like monuments to this lovely philanthropist and her assistants, stand three commodious homes in the city, filled with happy working women. The philanthropic woman, as a rule, is conservative. She does not attack man's prerogatives except on the neutral ground of typewriting and bookkeeping, but seeks to make feminine knowledge and its application more thorough and efficient.

A tender spirit was shown in the thought of Mrs. William G. Choate to establish in New York a place where woman's work might be sold with profit to herself, and in such manner as not to wound the sensibilities of refined gentlewomen who had unexpectedly been thrown upon their own resources for a Mrs. Choate opened the Woman's Exchange in 1878. with thirty poorly made articles for sale; society women rallied to her assistance and the exchange throve under their administration. Women were taught how to bring all their work up to a standard as near perfection as possible, and through the medium of the exchange, hundreds of homes have been preserved and thousands have found a livelihood in sweet, sequestered ways. Invalids know where they may buy the purest delicacies; housekeepers patronize the delicious, home made preserves, confections and the like; while grocers and the art departments of large stores alike demand the products of the busy fingers that work behind the veil of the exchange, which is not, and was never meant to be, self supporting at the expense of its beneficiaries. Sixty similar institutions in the United States foster a spirit of independence in thousands of women, and aid the Indians of Alaska, the Acadians of Louisiana, and the peasantry of far off Russia, by sales of their handiwork in baskets, Attakapas cloth, and Russian lace, metal and wood work.

Few things show the far reaching influence of these exchanges for women better than the fact that besides all Ameri-

can women who come to them, they extend aid to far away peoples—Russians, Armenians and Mexicans alike profiting by their benevolence.

The art galleries of New York point to Mrs. Elizabeth U. Coles and Catharine Lorillard Wolfe as philanthropists through the avenues of art; and the country to Helen Gould and Grace Dodge, Gail Hamilton, Mrs. Stanford, Mrs. Hearst and Mrs. Reed, whose works and gifts have been ever towards the uplifting of young women in all the paths of knowledge.

Mrs. Newcombe gave to young women in the south a college, a church and an art gallery; and Miss Annie Howard is not the only woman in America who has built and endowed a splendid library and presented it to the city of her birth.

On the rolls of American philanthropy shine the names of an innumerable company of women; names revered in the hospitals and asylums and homes which they have built or made possible; in the multitude of libraries and schools which they have scattered broadcast all over the land; most of all glorious for the work they have done in reaching through the young to attain to the highest and best standards of manhood and womanhood—to obtain the greatest good for the greatest number.

THE FIRE FIGHTER OF TO-DAY

BY JOHN CAMPION.

[John Campion, fire marshal, Chicago; born county Kilkenny, Ireland, 1849; came to Chicago in early childhood; educated in parochial and public schools; appointed on Chicago Fire department as a regular member April 1, 1870, as pipeman on steam engine, Little Giant; promoted to assistant foreman, 1871; Captain, November 11, 1873; appointed assistant marshal and chief of battalion, April 8, 1882; third assistant fire marshal, July 1, 1893; second assistant fire marshal, April 30, 1895; first assistant fire marshal, July 1, 1901; appointed fire marshal and chief of brigade, October, 17, 1904.]

The fact that most of the great firemen of the United States rose from the ranks is good proof that the men in the ranks to-day are, as a rule, efficient, intelligent, and ambitious fire fighters. The true fireman, and there are many of them in the Chicago department, is not content with just holding his job. I would not insist that any special genius is required to make a good fireman, but I do think that a number of qualities, amounting almost to special faculties, develop rapidly in the born fireman.

The kind of fireman's work which the newspapers are fond of writing about, such as daring death near falling walls, dashing drives to the fires, and other spectacular performances which the honest fireman regards as mere incidents in his daily routine of duty, are not always the best methods by which to judge of the true value and effectiveness of a fireman's work. The average fireman of experience and intelligence never thinks of taking any special credit to himself for his performances at any given fire. He is, and to be a useful member of the department must be, readily amenable to orders. He obeys his commander as readily and as unquestionably as a good soldier heeds his superior in battle.

If he is ordered to the roof of a building adjoining the fire, he goes there as a matter of course. And he stays there, obeying orders regardless of consequences. His commander takes the responsibility because he is expected to, and does know just what chances he may take in exposing his men for the ultimate purpose of defeating the fire. The company captains and lieutenants, the battalion chiefs and the assistant mar-

shals, the men in command at fires, are such for no other reason than that they are good firemen—they know their business, and all of them have been, and are still willing to be, in the same predicaments to which they send their subordinates.

In the career of a fireman this thing of knowing your business is as essential to success as it is in any other walk of life. But the knowledge involved is not confined between the engine house and the sudden fire. For instance, the captain and lieutenant of a company will, if they are devoted to their duties, make it their business to become acquainted with the district in which they are to operate. To know a district means more than to be sure of the location of buildings, the conditions of streets and alleys, and the situation of the fire hydrants. It means also a thorough and continuous familiarity with the construction of every house, the disposition and character of the contents of every establishment, the arrangement of fire escapes, and the points of vantage from which a fire may be attacked.

It is not possible to exaggerate the value of this information; for the commanding officer of a company of firemen has something more than the saving of property on his hands. The lives of his subordinates may, some day or night, depend upon his absolute knowledge of the style of construction and the character of the contents of some building. To master all of these details requires time and careful investigation, and the officer or man who expects to be of the greatest and most lasting service to the department will find, if he is industrious, that there is plenty for him to do between fires.

It will not do to depend always upon the captains, lieutenants, and other higher officers for this superior knowledge; for occasions may arise in which the regular commanders are absent or off duty, and in such an event the authority over a company may descend upon one of the firemen, subject of course to the instructions of the battalion chiefs, and, finally, the marshal or assistant marshal in charge. The public of the big cities are apt to fancy that the fireman's work is done when the "fire out" signal is sounded, but that is not true. The fact is that every fire engine house in the city is an informal training

school for the men whose business it is to save from flames the property and often the lives of taxpayers and residents.

It is a fact that few men who adopt the career of a fireman do so merely for the pay. Nine out of ten of them are born firemen, and they bring to their work something more than the common ability to work hard. They have a pride in their work which is not apparent in many trades. Their courage, their physical strength, their everlasting readiness, are regarded by themselves as matters of course. But, as a rule, they go beyond this. The fireman in the ranks, if he has the proper spirit, if he means to excel, is likely to know all about his district. If he is serious about his work, he will know where the blind alleys are and, either by personal investigation or by dint of conversation with his comrades, he is almost sure to know a great deal about the layout of every fire that may occur in his neighborhood.

Of course with the marshal, the assistant marshals, the battalion chiefs, and the captains and lieutenants of companies this is an absolute duty—this work of personally investigating buildings and their contents and the streets, alleys, fire hydrants, and surroundings of the sections under their control.

Perhaps no branch of public service requires more of the time and attention of its men than the fire department. They must not only be ready for the call of duty during the day, but they must sleep at their stations at night. For more than thirty years I have not lived at home. There are hundreds of firemen in Chicago who live similar lives and who have accustomed themselves to forget their private wishes and comforts in the desire to fulfil their duties.

Besides the work of fighting fires there is an unending routine of less interesting work about the company houses. They must be kept clean and orderly; the horses must be cared for and trained; the apparatus must be maintained spotless and ready. Fire drills, physical training, the always changing conditions of the buildings, streets, and alleys of the city give the energetic, industrious firemen plenty of occupation, and, as a rule, these less heroic details of their duties are not neglected.

The system of safeguarding districts from which the

different companies have been called out to fires is perfectly understood by all of the commanding officers of the department and by all of the firemen. The public may not know it, but this feature of work in the Chicago department runs with such absolute accuracy that, no matter where the fire is nor how large it is, the districts which have sent their regular companies to fight the flames are not left unguarded. The central office in the city hall is, so to speak, the nerve center of the whole department. The printed schedule with which every fireman is familiar, shows at a glance which of the marshals and battalion chiefs must go to each fire as indicated by the box number from which the alarm was sounded.

For instance, if the schedule says that I must go to the fire and that the first assistant and the second assistant are also gone, the next man in rank knows that he is to come to the central office and from there dispose of the companies which are not at the fire in such a manner that no district is left unprotected from later fires. Complicated as such a system may seem at first glance, yet it is thoroughly understood and always works without friction. Every engine house keeps its own record, not only of its own runs but of all the companies that participate in any fire, and also a table showing to what houses the company went to do what you might call

guard duty during the progress of fires.

The practical side of a fireman's life is sure to be a busy one for the good fireman. In this respect it is like any other business. Lazy men, loafers, careless members never become good firemen, and they seldom last long. The industrious, thoughtful, observant man, if he is fitted physically, is the one who lasts and who rises at last to the position of authority. The sluggard and the coward have no business in the department. The Chicago department is exceptionally free from It is a hard life at the best, and, like all hard lives, brings out the best that is in a man. Everybody knows that it requires courage and strength to be even an average fireman. But quick intelligence, continual study of the details of the work and its chances, absolute devotion to the service at all hours and under all conditions—these are the least showy features of a fireman's life, and they are just as necessary as bravery and a powerful body.

Vol. 10-15

BUILDING AND LOAN ASSOCIATIONS MAKE BOTH MEN AND CITIES.

HERBERT FRANCIS DeBOWER.

[Herbert Francis DeBower, lawyer and publisher; born in Wisconsin in 1873. Graduated University of Wisconsin, 1896. After a year at Madison, Wisconsin, he forsook the practice of law to enter the publishing world. He went to New York city and reviewed several articles that later appeared in the American and English Encyclopedia of Law; during this time he made a close study of the law of building and loan associations and later gained practical experience in the sale of building and loan stock; he has been an extensive traveler, having visited every state and territory in the United States, Mexico, Canada, and the Insular possessions; is president DeBower-Elliott Company, Chicago.]

From its first night's business meeting a building and loan association becomes a modified savings bank, in which at least one member ought to be able to borrow \$1,000 at 6 per cent per annum, taking the money away with him to put under his pillow if he so wills, regardless of the business day and banking hours.

This statement, however, would make it necessary that 100 members be in attendance, holding 1,000 shares of the stock at \$200 each, on which \$1 a share is the monthly due of the member. In one way or another the man who would get the \$1,000 loan would have paid for the privilege in cash, or would have proved his luck by lot. And the ninety nine other members of the organization would disperse lighter in purse, but satisfied.

Considered as a form of banking, however, the whole transaction is the apotheosis of simplicity. No place of business has been necessary. There is no burglar proof safe in the furniture and fixture accounts. There are no fireproof vaults for the storage of the concern's books. No cash is left to tempt a dishonest cashier or teller. No possible run on the institution could wreck it. There are no idle, uninvested funds to vex the management. One man has \$10 of his own money and \$990 belonging to the other fellows, and, as long as he pays his \$1 a share in dues and keeps his interest up, the whole 100 membership is in a fair way to earn its 10 to 14 per

cent profit, judged by the history of well conducted building

and loan companies.

In the briefest and most pointed English the building and loan association is the gathering of the 100 men most of whom would like to borrow \$1,000. There is a total of \$1,000 in the pockets of the whole crowd. They agree and dump the money into a hat. Then the man who will bid the highest premium for the loan, or who is lucky enough to draw the deciding number by lot, takes the pile, paying interest at a fixed rate to all the other ninety nine contributors. Next month the 100 men meet again, dump another \$1,000 in the hat, and the ninety nine contest for the privilege of the loan.

But not all building and loan members desire to borrow money. It is desirable that not all of them should, and for this reason the man who doesn't want a loan finds some con-

cessions made him to enter.

In the first place this small investor has been up against the savings bank proposition, perhaps in an unexpected light. Perhaps he once deposited \$200 in a savings bank on Jan. 5 of some new year. He left it there till July 1 and got his interest, amounting to about \$3. He left it in the bank perhaps till Dec. 27 of that year, when he went to draw it out. Then he discovered that instead of his having within a few cents of \$6 for the use of his money the bank tells him that nothing is due him for the reason that he is taking the money out just five days too soon for the interest credit.

This man becomes the best kind of investing member in the building and loan association. He is a careful, saving type. He is punctual and businesslike in his small dealings. He may shy at first when he discovers that a membership fee is exacted of him before he can deposit his \$1 a month on his block of shares, but he is comforted when it is explained that every other member of the institution must do the same thing.

It is just in his line when he is told further that every man must come up to the scratch with his dues before a certain date early in the month or pay a fine into the treasury. It is no shock to his sense of business to discover that a member can draw out only 95 per cent of his total interests in the association previous to the maturity of his stock. He is satisfied,

also, if, in lieu of this penalty. the man drawing out pays \$1 or \$2 a share for the privilege. All these provisions are directed at the careless or defaulting or failing type of man, and the sum

of all these exactions will redound to his final profits.

Easier than a savings bank for the man who wants to borrow money—safer and more profitable far to the man who wishes to deposit money—no fear of embezzlements, panicky runs, doped books, or wildcat speculations—all these possibilities are shown to the man who in his own local neighborhood or small city goes in with men whom he knows in a mutual agreement for community welfare and individual profit; and, above all, the fact that no one other than the secretary receives a salary compensation, from president down.

Frankford, Pa., a suburb of Philadelphia, originated the scheme in the Oxford Provident Building and Loan association away back in 1831. Between 1840 and 1850 the building and loan association rose to the dignity of a permanent institution, and ever since the state of Pennsylvania has held the palm for

numbers of associations and memberships.

Ten years ago the scheme was in the height of its exploiting, favorable and unfavorable. Some trickeries and crookedness in certain ways and means, especially in the national companies, made bad odor for the association scheme. But the building and loan association, as a mutual organization for building loans and safe investments, is by no means dead or dying. Among these associations, local and national, which existed in 1893 there was a membership of 1,745,725 in 6,000 associations; there were \$450,000,000 in shares outstanding; only 456,000 members of associations were borrowers; and in the life of the institutions then in existence only 8,400 mortgages had been foreclosed, valued at \$12,217,000, and showing loans of only \$450,000.

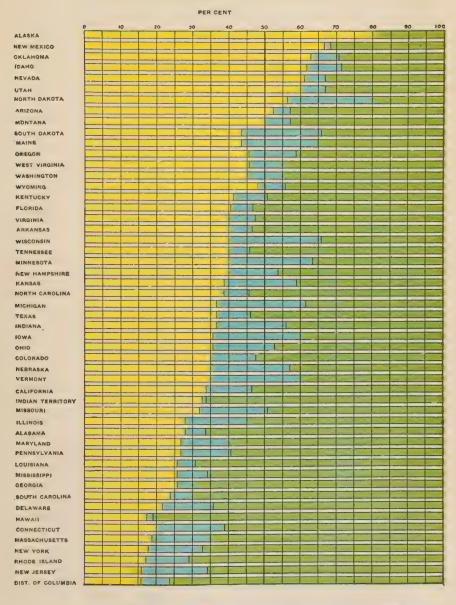
Considering that 90 per cent of the membership in these institutions were without banking experience or investment experience of any kind, could the showing be better? And especially could it be better when in the mere plans for the distribution of matured shares and earnings there were twenty six methods in use and nearly 100 plans for the reducing of

dues and the adjustment of loan apportionments?





PROPORTION OF HOMES OWNED FREE, OWNED ENCUMBERED, AND HIRED







The first rock which the building and loan association struck hard in its evolution was that condition when no member of the association desired to borrow any more money. His shares had matured, releasing his loans and obligations. There was no provision for loaning funds to any one but a member. The dues collected, and there were no takers coming forward with premiums or drawing schemes by lot. Out of the anomalous condition the forced loan was suggested. By the same lot drawing, somebody who didn't want the money was stuck with it for a loan period, whether he would or not. The result of this unexpected expedient led to another solution of the general difficulty.

Much of this trouble had come about through the ruling that the man coming into an association after its organization was required to pay all back dues upon the original first issue of shares. If only a month had intervened the difference was slight. If it were a year or two years, the back dues were

great enough to be almost wholly prohibitive.

The first plan evolved for the perpetuity of the association provided for the issuance of a new share series whenever occasion required. On this issue the new member paid just as the member in the first series paid, after his entry taking his proportionate earnings of the combination accordingly as his money had been used. Members were encouraged to withdraw shares near to maturity. The holding of free shares—shares not loaned upon—was less encouraged. As a result, the average life of any one series was fixed at four years by these conditions. This serial plan virtually is the plan of the building and loan association of to-day, unless in individual communities where it is the aim and wish of members that the terminating association is all that is needed.

Not a little ingenuity has been expended in the many plans for choosing the preferred claimant for a building loan.

As one of almost 100 methods the following is typical:

A man has taken five shares in the association at \$200 each. He needs the \$1,000 that is on hand, and, especially as any premium he pays for the privilege goes into the general profit fund of the association, he feels disposed to bid sharply with any possible competitor for the privilege. And he does.

The bids run up until he gets the loan for a premium of 5 per cent. This \$50 is taken from the full amount of the loan, leaving the borrower with \$950 and yet obligated to pay the \$1,000 principal and interest on that sum at 6 per cent. In the meantime, at \$1 a share each month, his dues are \$60 a year, and his interest and his dues are continued until he can withdraw or until his shares mature and are canceled. In the meantime his security for the loan has been a first mortgage upon the property into which the \$950 first went.

In some companies the plan of determining the borrower is decided by the bidding system, but in another way. The man who will come forward with the largest number of dues to be paid in advance, accompanying these with the greatest sum of interest in advance, gets the loan. His dues are settled in advance for that period and no more interest is paid until

the advance interest has been absorbed.

But if a hundred plans for deciding upon the borrower have been necessary, the twenty six or more plans for the distribution of profits to the memberships have been even more interesting and complicated to the casual demonstrator in arithmetical calculations.

It was with the adoption of the new series idea that these figures became troublesome. Sometimes an association has found it necessary to issue a new share series every quarter. How to adjust the profits to each member has been difficult of solution. Out of the twenty six processes that have evolved,

one is indicative of the general scheme.

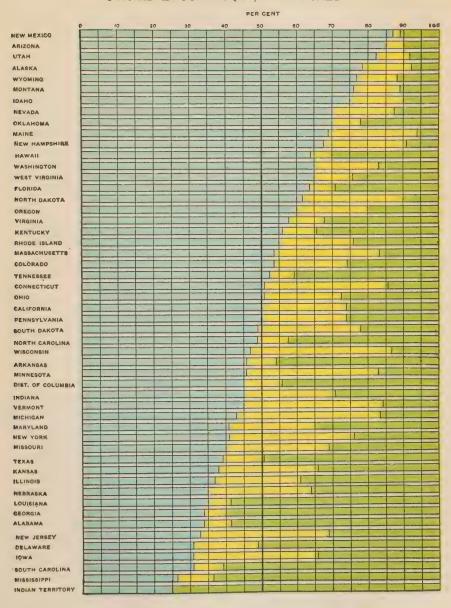
For illustration, it will be considered that an association has completed its fourth year, having issued four series of shares on the first of each January, and is preparing for a distribution of \$3,000 profits for the fourth year. In the first year 500 shares were issued, 600 shares in the second year, 400 shares in the third, and 500 shares in the fourth year, the payments being \$1 a month for each share.

At the end of this fourth year under consideration the man who made a first payment on his shares has paid in \$48, and there were 500 of these men, according to the illustration. Then through the whole four years the total dues on the four

series paid in would stand:



PROPORTION OF FARM HOMES OWNED FREE, OWNED ENCUMBERED, AND HIRED





\$48 by	500	 	• • • • • • • • • • • • • •	\$24,000

Total dues......\$61,200

According to the books of the association the shares in the first series before the fourth year apportionment are worth \$38.87; in the second series they are worth \$25.27; in the third they are worth \$12.32, with the shares in the fourth year undetermined. Determining these values of each share in the four series, the process is as follows:

Dividing the \$3,000 net profits of the fourth year by the \$61,200 of aggregate dues for the whole period, the rate per cent of profit on these dues is 4.9019 for the year. With this

rate established the rest is simple:

				Value
		Last		each
	Profit.	value.	,	share
\$48 by .049019\$	32.35 plus	\$38.87 plus	\$12	\$53.22
36 by .049019	1.76 plus	25.27 plus	12	39.03
24 by .049019	1.18 plus	12.32 plus	12	25.50
12 by .049019	.59 plus	plus	12	12.59

When this calculation has been made with this sample piece of work, it is shown on the books that \$2 remains still undivided profit, presumably for the reason that it would take more time to divide it than the \$2 could be worth to any one.

There are tens of thousands of home owners in the country who have owed their homes to the building and loan associations. These in many instances have not been naturally saving and careful. The example of some friend or friends in suburb or city neighborhood has stirred them to the possibilities of a home based upon a careful, systematic business principle, and in the exacting measures of an association of which the careless type is a full member the naturally delinquent nature has been roused. In a dozen ways the headless local building and loan association has been building not only cities but men.

FRATERNAL INSURANCE IN THE UNITED STATES.

BY B. H. MEYER.

[Balthasar Henry Meyer, professor University of Wisconsin, and member of railroad commission, born Mequon, Ozaukee Co., Wis., May 28, 1866; educated at the Oshkosh normal school, University of Wisconsin, and University of Berlin; has conducted investigations for the United States Census Bureau and Interstate Commerce commission; now in charge of division of transportation, Carnegie institute. Author, Railway Legislation in the United States. etc.]

There are in the neighborhood of six hundred fraternal beneficiary societies in the United States, with an aggregate membership of about five millions. Approximately one half of these societies maintain systems of benefits which are chiefly remedial, and which can not properly be characterized as systems of insurance. During the year 1899, one of the largest orders providing this kind of benefits expended \$3,119,125.47 in relief work. Yet the organization in question is not a fraternal insurance society. It simply does relief work on a

grand scale.

Very different in nature are the benefit systems and protective features of the other half of the fraternal system. The societies of this class may engage in relief work similar to that of the other class, but they attempt more and something fundamentally different. They bind themselves by contract to pay a certain sum of money as relief, benefit, or protection. on the occurrence of certain events; such as sickness, disability. death, etc. The important consideration in these cases is the fact that a specific sum of money is to be paid to some beneficiary as soon as certain designated contingencies have arisen. This sum of money is named in the certificate, together with the name of the beneficiary, the amount of his periodical contributions, etc. In view of the fact that so many persons connected with fraternal societies object to the use of old line terms, it may be well to explain that the writer selected the title of this paper, Fraternal Insurance, after some deliberation. It is his intention to confine this discussion to what is expressed in the title; namely, to insurance carried on by fraternal societies. Here one is at once met by the objection that fraternal societies, as a class, do not engage in insurance business, and that they are far removed from the material motives of speculative insurance companies. The answer to these objections is apparent: Any organization which guarantees the payment of a definite sum of money, under certain circumstances, dependent upon the contingencies of human life, in return for certain contributions, does an insurance business. We may call the document relating to this arrangement a certificate; the payments made periodically contributions, fees, dues, etc.; the final payment, on the occurrence of the specified contingencies, benefits; the whole is nevertheless an insurance contract, pure and simple, and the society issuing such a certificate is doing an insurance business, subject to all the laws and principles applicable to insurance in general. This last proposition, long accepted by a few fraternal societies and ignored or bitterly contested by many others, deserves especial emphasis.

The dual nature of fraternal societies has probably been partly responsible for the perpetuation of the fallacy that insurance is one thing and that fraternal insurance is another and a different thing. The fraternal societies falling within the scope of this essay—one half of the total number—are both fraternities and insurance companies, the fraternal element sometimes overshadowing the beneficiary features, or vice versa. It is probable that the cohesive power of numerous societies doing an insurance business would fail, were not the fraternal features so potent. In the preservation and extension of the field which the fraternal element has gained, and in the thorough reformation of defective benefit systems must lie the future development of the entire fraternal system.

Evidence to show the existence of defective schemes of fraternal insurance is not far to seek. In a circular issued by one fraternal society the position is maintained that mortality experience cannot be reduced to law! Another attempts to prove that the addition of new members will always keep the average age of the entire membership down to a certain level, and that with additional effort the same can permanently be reduced. How to do this—to follow the argument to its logical conclusion—without ultimately including

the population of the world, and then making the populated globe larger, the author does not explain. Still another asserts that the death of some members soon after joining the order does not weaken the association. The first death in the order is a case in point. Our deceased friend held a \$3,000 contract and had paid only one assessment of \$3. The amount placed in the reserve fund by reason of his death was, therefore, \$897. This was loaned at 5 per cent, and brings in \$44.85 per year. If he had lived, the most he could have paid in twelve assessments would have been \$36 a year. Yet the sum that his death added to the reserve fund is earning more than that, and in time will make good the amount paid to his beneficiaries. In spite of such gross fallacies this society is gaining members

rapidly in one of our greatest commonwealths.

It would be a thankless task to rehearse the long tale of failures among fraternal societies. Besides, old line companies and other departments of the mercantile world have had their epidemics of financial ruin. Yet, excepting paper money crazes, history probably affords no parallel to the blind and persistent adhesion which so many people in all parts of the United States have shown to hopelessly unsound schemes of fraternal insurance. An examination of many such schemes leaves upon one the impression that their promoters thought of certain sums of money to be paid as benefits under certain conditions on the one hand; and of certain contributions which it might be convenient to make, on the other; without apparently reflecting upon a possible causal connection between the two. The history of such organizations is quite generally the same. A rapid increase in membership, possibly also a simultaneous reduction in the average age; a gradual increase in the death rate, accompanied by increasing difficulty in securing new members; an increase in assessments or rates and loss of members, or an attempt to slide along without raising assessments; and finally, financial failure. That some fraternal societies are thoroughly sound, financially, and that others have successfully advanced rates and maintained the integrity of their organizations does not affect this general statement. On the other hand, the very fact that an increase in contributions was found necessary in various societies is prima facie evidence that the original scheme was financially unsound.

A late and important failure illustrates this. At the time of organization no attention was paid to mortality tables. As the members began to grow old and the dues increased, it was found that the assessments had been fixed too low to meet the obligations. At various times since the institution of the order it has been found necessary to increase the assessments, but old members agreed to pay the increase because they had reached an age when insurance in a regular life company could no longer be obtained. Another inducement for continuing in spite of the larger assessments was the fact that they had so much money invested in the organization that they felt they could not afford to lose it.

The proceedings of the National Fraternal congress for 1899 found that the rates paid for the same kind of insurance, at the same age, in different societies, were: at the age of 30 from 25 cents to \$1.40; at the age of 50 from 65 cents to \$3.80.

Still more elaborate comparisons are made in the subjoined table, exhibiting, except in columns 1, 11 and 12, level annual rates for \$1,000 of whole life insurance. Column 1 gives ages. Column 2 gives the net annual level premiums based upon the American experience table, with 4 per cent interest. Since net premiums provide for the so-called reserve and mortality elements only, but not for the loading or expense element, the premium actually collected, gross or office premium, must be considerably in excess of what is indicated in this column. The assumed rate of interest is perhaps too high for a time when a number of leading companies are going over to a 3 per cent basis. This would necessitate another addition to the net premium, for the lower the assumed rate of interest, the higher must the premium be. Column 3 contains the net annual level rate per \$1,000 of whole life insurance, adopted and recommended by the National Fraternal congress. Columns 4, 5, 6, 7, 8, and 9 show the rates collected by as many different fraternal societies for \$1,000 of whole life insurance.

For columns 5, 8 and 9 the annual rate was secured by multiplying the monthly rate by twelve. The product is

Comparative Exhibit of Fraternal and American Experience Tables.

A 89.	Level Annual of Insurance.			Premiums for \$1,000.				Probability of Dying.			
1	2.‡	3.‡	4.	5.*	6.	7.	8.*	9*	10.†	11.	12.
21 22 22 24 25 26 27 28 29 30 31 32 33 34 43 44 44 45 46 47 47 48 49 50 51 53 55 55 55	12, 95 13, 24 13, 54 13, 54 14, 21 14, 57 14, 57 15, 35 15, 37 16, 21 16, 68 17, 18, 25 18, 84 19, 46 20, 82 20, 82 21, 57 22, 35 23, 59 24, 08 25, 08 25, 08 27, 12, 29 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 36, 98 37, 98 38, 79 3	10, 62 10, 92 11, 24 11, 52 12, 28 13, 51 13, 96 14, 43 15, 47 16, 03 16, 62 17, 24 17, 24 17, 24 18, 30 11, 30 18, 30 18, 30 19, 30 19, 30 19, 30 20, 31 20, 31 20, 31 20, 31 30, 31 30	7.08 7.32 7.68 7.92 8.16 8.40 9.00 9.36 9.72 10.08 10.56 11.40 11.76 11.40 11.76 12.24 13.08 14.40 15.12 15.84 16.56 17.28 18.12 19.80 20.76 22.28 22.80 24.00 25.20 26.64 28.08	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	4,80 ("" "" "" "" "" "" "" "" "" "" "" "" "	11, 20 11, 20 12, 80 14, 40 16, 80 17, 60 19, 20	8.40 8.40	7.56 7.68 7.80 7.92 8.04 8.16 8.64 8.84 8.88 9.02 9.26 9.74 10.46 11.42 11.40 11.42 11.6.80 17.00 19.40 20.60 19.40	14.72 15.04 15.38 16.91 17.35 118.28 118.79 20.46 21.74 22.43 23.16 21.74 25.62 29.67 30.49 30.4	007855 007906 007906 007958 008011 008065 008130 008197 008264 008345 008427 008510 008607 008718 008946 009089 009234 009408 009586 009794 010008 010552 010517 011562 012509 013106 015509 013106 015589 0165889 0165889 0165889 0165889 0165889 017396	.005035 .005071 .005107 .005107 .005153 .005209 .005318 .005289 .005552 .005647 .005753 .005872 .006004 .00698 .006904 .006909 .00699 .006908 .007171 .007171 .008113 .008181 .008181 .008181 .008181 .008181 .009754 .01928 .0192
56 57 58 59 60	45.00 47.35 49.87 52.57 55.45	41.41 43.60 45.94 48.45 51.13		12.60 12.60 13.20 13.80 14.40 15.00	15.00	00000			45.54 47.76 50.13 52.66 55.37 58.27	.018371 .019885 .021335 .022936 .024720 .026693	.0157054 .0168587 .0181200 .0194994 .0210513 .0227504
61 62 63 64 65	58.54 61.84 65.39 69.18 73.25			15.60 16.20 16.80 17.40 18.00	*****		0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0			.028880 .031292 .033943 .036873 .040129	.0246434 .0267240 .0290330 .0315711 .0343904

^{*}Secured by multiplying the monthly rate by twelve. †Gross premiums.

Net premiums.

consequently too large, for monthly payments must necessarily be greater than one twelfth of the annual premium, to compensate for loss of interest and the lesser losses due to intervening mortality. Annual premiums are always supposed to be paid at the beginning of the year, thus giving the society the benefit of the interest earnings during the year. In case of monthly payments these earnings are appreciably smaller because of the reduced periods of time during which loans can be made. Column 10 exhibits the gross or office level annual premiums charged by a society which aims to provide pure insurance at the lowest possible cost under a mutual system. This table has the sanction of able actuaries. Columns 11 and 12 show the probability of dying according to the American experience and National Fraternal congress tables respectively. In these columns one finds the reason for the differences existing between columns 2 and 3, the probability of dying being correspondingly lower in column 12.

It will be noticed that the premiums in column 3 are approximately one sixth lower than those in column 2, up to age thirty five; and that for ages above thirty five they are only about one tenth lower. Although the rates of column 4 are generally one third below those of the fraternal congress. they show system and careful calculation, as a comparison with columns 2 and 11 and 12 will readily reveal. Columns 5, 6, 7, 8 and 9 are fair examples of that type of fraternal societies which attempt to make the world believe that accepted mortality tables are thoroughly bad, and that they can furnish insurance or protection at rates from one half or one third to one fourth of old line rates. They promise benefits out of all proportion to the contributions made, and sooner or later go into inevitable ruin. Column 10 shows the table of rates prepared by competent actuaries for a society which aims to furnish insurance at the lowest possible cost consistent with safety and efficiency. This society, furthermore, aims to eliminate the investment features from its insurance, and to restrict its business to the furnishing of mere life protection. If the relief work of many fraternal societies may be characterized as remedial, the insurance of this society may be described as preventive, just as tontine and semi-tontine policies may be termed speculative. Modern life insurance as a whole is primarily preventive; whereas in its beginnings, insurance was chiefly remedial. The transition from the remedial to the preventive form was made possible only by the scientific formulation of accumulated experience, and the transaction of insurance business on the basis of this experience. cumulated experience eliminated gradually the chance or speculative element which was so prominent in some earlier forms of insurance, such as the maritime or sea loan, in connection with which some life underwriting was also done. Although an element of speculation still survives and the investment features of many policies are predominant, modern life insurance is the greatest engine of prevention which the world has known. Failure to recognize the scientific truth that the efficiency of this preventive work depends absolutely upon rigid adherence to health experience has not only brought disaster to thousands of fraternal societies, but has tended to throw the entire fraternal system into disrepute, as well as

to discredit insurance in every other form.

The fact is, therefore, worthy of emphasis that the National Fraternal congress has for some time recommended a table of rates (column 3) which is the result of years of work of a standing committee of this body. Like all other scientific tables of rates, this is based upon a mortality table. Only a part of the fraternal congress mortality table is given in column 12. The committee took into consideration the published experience of old line companies in the United States and several foreign countries, and the experience of several of the largest and oldest fraternal societies in this country. committee was unanimously of the opinion that the actuaries' and American experience tables are too high both from the experience of the old line companies and from that of fraternal societies. Having reached this conclusion, the committee combined the various actual mortality experiences into a new mortality table. The latter was made the basis of the premium rates in column 3; and, in addition, of step-rate and modified step-rate plans. A fraternal society might accept the mortality table without adopting the schedule of rates. stance, column 3 assumes 4 per cent interest. This is probably too high for the present; hence, a society desiring to assume an interest basis of 3 or $3\frac{1}{2}$ per cent could construct its own tables on the basis of the mortality table, giving it, of course. a higher rate of net annual level premiums than those of column 3. The chief significance of the work of this committee on rates lies in the official recognition which has repeatedly been given by fraternalists to this kind of work, and the inference that any fraternal society whose experience is more unfavorable than that assumed in the fraternal congress tables is faulty either in plan or management, or both. It is doubtful, however, whether fraternalists as a body sufficiently

realize the advantage of assuming a more unfavorable mortality rate than their own experience realizes. No one will be inclined to question the desirability if not also the necessity of

erring on this side of the line.

Here we are confronted by the question of reserve and surplus. An ideal system of pure life insurance would be one in which the actual experience is identical with that assumed in the mortality table upon which the organization in question bases its tables of premium rates; in which the interest earnings are exactly equal to the assumed rate; in which the expenses of management absorb only the sums set apart as loading; and in which there exist no lapses, surrender values, etc. It is needless to add that such an ideal can never be fully realized in practice. To base gross premiums or assessments on the lowest possible death rate, a high rate of interest, and the least allowance for expenses of management, and then encounter experience more unfavorable than that which was assumed in estimating premiums, in any one or more of these lines, if continued for a longer or shorter period of time, can result in nothing but failure. To assume too high a rate of mortality, too low a rate of interest, and too heavy an expense in administration, makes premiums unnecessarily high, and results in the accumulation of a large surplus. This is what fraternal societies object to; yet, if an error is made, it should certainly be made in this rather than in the opposite direction; and with wise management, under a participating system, a distribution of these accumulated funds will ultimately be of benefit to the policy holder. With a relatively small number of exceptions, fraternal insurance societies have erred not only in neglecting scientific mortality tables, but also in assuming experiences much too favorable under present social condi-On the other hand, their aim to provide pure insurance at the lowest possible cost is a laudable one, and, when accepted business methods are pursued, capable of diffusing great benefits among members. The accumulation of an enormous surplus is considered inconsistent with fraternal principles: vet it should be added that the accumulation of no surplus whatever is probably always (except in natural plans) inconsistent with safe business principles, because it

signifies either that interest, cost of insurance, and loading, as assumed, are exactly realized in practice, in which case the ideal would have been attained; or, which would be disastrous, that experience is more unfavorable than the assumptions on which the business is based. Prudence would dictate that at least a small margin should be allowed for adverse conditions.

So much for the question of a surplus.

Somewhat different in nature but of even greater importance is the question of a reserve. The National Fraternal congress has almost from the very first included this among the subjects for discussion, and the organization of an American fraternal congress at Omaha, in October, 1898, making the chief qualification for membership the adoption of a reserve system, is significant in that it shows a well marked division of opinion among fraternalists on the question of reserves. The National Fraternal congress has not yet taken steps making it obligatory on the part of its members to adopt a reserve fund; yet, speakers before this body have repeatedly urged the necessity of adopting reserve systems. A number of societies—consistent with the traditional fraternal dislike for old line terms—have established safety or emergency funds, which are technically reserve funds. Several prominent fraternalists expressed their approval of both a reserve and a natural plan before the National Fraternal congress of 1900, and similar utterances were made before the same congress during earlier years, notably in 1893, 1894 and 1898. amination of all the proceedings of this congress gives the reader the impression that there is an unmistakable tendency among fraternal insurance societies toward the reserve or natural premium plans, especially the former.

Disregarding several minor considerations, under a reserve plan the premiums are level, i. e., do not vary in amount during the premium paying period of the policy. Since the cost of insurance—i. e., moneys required to meet current mortality losses—increases with increasing age, it follows that under a level premium system the earlier premiums are greater and the later premium payments less than the cost of insurance for the age represented by the policy holder in question. That part of the level premiums which is in excess of the current cost of

insurance is improved with interest and reserved to counterbalance the deficiencies of later level premiums. In other words, every level premium embraces an investment reserve, in addition to other elements which need not be discussed here, with which future losses are met. Under a natural premium plan the policy holder—again disregarding loading, etc.—pays just enough to cover the cost of insurance for his age, and no Natural premiums are, consequently, low during youth and increase with advancing years, until finally they become practically prohibitive. Assuming that the premiums are payable at the beginning of the year, it is evident that even under the natural system some reserve exists with which to meet losses during the year. This form of reserve may be termed insurance reserve. It is used to meet current losses and is greatest at the very opening of the year, gradually decreasing until at the end of the year it is completely exhausted.

The tables of the fraternal congress admit of both the reserve and the natural premium plans. The reserve plan involves the adoption of a level premium table like that given in column 3 of the comparative exhibit, and the natural plan is illustrated in the table given below. Both tables of rates are based upon the same mortality tables. The committee on rates of the fraternal congress has also prepared other modifications of the natural plan, but this one will suffice for purposes of illustration.

STEP-RATE AND MODIFICATIONS.

1. Ages.	2. Annual.	3. Monthly.	4. Monthly.	5. Monthly.
21-25	\$ 5.11	\$ 45	\$ 60	\$ 75
26-30	5.40	48	63	78
31–35	5.93	52	67	82
36–40	6.71	59	74	89
41-45	8.14	72	87	1.02
46-50	10.25	90	1.05	1.20
51-55	13.82	1.21	1.36	1.51
56-60	19.60	1.72	1.87	2.02
61-	54.01	4.73	3.00	2.50

Vol. 10-16

The report of the committee contains the following explanation of this table: Column 2 gives the annual rates for the natural step-rate to age 61, and a level rate from that age for the balance of life. Column 3, the monthly rates as derived from the annual rates, with allowance for slight loss due to that method of payment. These two columns are the basis for calculating columns 4 and 5. Column 4 shows a modification of the natural step-rate by means of an accumulation of 15 cents per month, which is used to reduce the level cost from age 61 to \$3.00 per month. Column 5, a similar modification, but with an accumulation of 30 cents per month and a level cost from age 61 of \$2.50 per month. Under either of these plans all members pay the same rates at the same attained The purpose in view in these tables is to have a plan that requires but little detail in its operation, so as to be readily comprehended by the officers of the local lodges. It will be noticed that an accumulation is provided for in the rates of columns 4 and 5. This is technically a form of reserve, and in so far as these accumulated funds permit the payment of premiums at advanced ages smaller than the cost of insurance, they perform exactly the same function as those performed by the reserve under the level premium system. The expediency of such an accumulation plan can scarcely be questioned. Fraternal societies have suffered again and again from losses in membership due to an increase in the size and number of assessments, or both. Men seem to object to constantly increasing payments, and in this lies the inherent weakness of the natural premium plan. It is thoroughly sound. It can not fail, but as a method of doing business it has serious faults: and, as long as human nature remains what it has been and still is, the natural plan is open to strong objections. Remembering that out of every thousand fraternal policies ninety four lapsed during the year 1898, and that in one society nearly 23 per cent dropped out, it is safe to assume that a more general introduction of the natural premium plan can only result in a continued high rate of lapses. The present high rate of lapses is unquestionably the result of a variety of causes, but it seems improbable that a system of premiums steadily increasing with the advancing years of the policy holder should do anything to check this movement. From a business point of view the adoption of level rates seems most expedient. Furthermore, since fraternal societies avowedly find their constituencies among persons of limited financial resources, and whose earning capacity sometimes decreases rapidly after middle life has been reached, the introduction of limited payment certificates or policies is worth consideration. Not only does the natural plan with its markedly rising cost of insurance in the higher ages levy a severe tax on the earnings of the small policy holder, but the level premiums even may become too burdensome. Fraternal societies strive to furnish, among other benefits, pure whole life insurance. When this involves lifelong annual or other periodical payments, the policy holder can see no end except death, to the number of his contribu-This objection holds against all whole life, unlimited payments policies; and consequently all insurance organizations must meet this proposition. It seems desirable that a person's heaviest contributions should fall within the most productive years of his life. Both the experience of fraternal societies with increasing assessments and the composition of their membership point to the desirability of the introduction of some limited payment premium systems. Mortality tables can be elaborated with mathematical precision, and fraternal as well as commercial insurance ultimately rests upon the same insurance principles. Two important points of superiority claimed for fraternal insurance are better selection and lower expense rates. The former, it is claimed, is in part due to the double selection coincident with the lodge system, under which the medical examination of the applicant is supplemented by the test of meeting the approval of the membership of the lodge. Points which might escape detection by the medical examiner may be known to individual lodge members, and this would be sufficient to reject the risk. latter—the expense item—is made much of. By confining themselves to pure insurance, i. e., insurance free from investment and speculative elements, fraternal societies claim that they can conduct their business with much greater economy. Fraternal officers point with pride to an estimated average expense of \$1.03 for every \$1,000 of insurance in force among

the forty seven societies comprising the congress, while twenty eight old line companies, in their reports to insurance departments, show an expense of \$10.30 per \$1,000, or exactly ten times as large. Because of the many differences existing in the two systems in the kinds of policies written, this comparison of expenses may require modification; yet it must be admitted that the ambition of fraternal societies to furnish pure insurance at the lowest possible cost to the policy holder is a commendable one, and capable of diffusing the benefits of insurance among much wider circles than has hitherto been possible. Old line companies have been introducing reforms in their systems of paying commissions to agents; and the desirability of limiting, by statute, the aggregate amount of insurance in force in any one company has been seriously proposed by officials of our giant companies. The possibilities of the fraternal system, when once thoroughly reduced to a sound business basis, are practically unlimited.

The demand for greater uniformity among the laws of the several states or for federal legislation is very strong. Some of the ablest and most prominent fraternal officials favor a federal law and national supervision. This involves constitutional questions concerning which nothing need be said in this connection. It also calls forth diverse opinions with respect to the question of greater centralization of power in the federal government. However, there can be but one opinion as to the desirability of greater uniformity, whether brought about by congressional action or by concerted movements in the different states. The National Fraternal congress, through its representatives, has for several years been striving to secure the adoption of the uniform bill, the chief contents of

which can be briefly indicated.

The bill is entitled, An act regulating fraternal beneficiary societies, orders or associations. Section 1 opens with a definition, which is conspicuously wanting in most of the existing laws. This definition is but an elaboration of what were enumerated as the essential characteristics of a fraternal society, at the organization meeting of the congress in 1886, and which have since been modified and repeated in successive editions of the constitution of the congress. No society is considered

fraternal unless it practices a ritual, has a system of lodges, a representative form of government, pays benefits, and does not conduct its business for profit. At the meeting of the congress in 1900, a representative form of government was defined as "one in which there is a corporate meeting of the supreme legislative body, provided for as often as once every three years, to be composed of the officers and, in addition, delegates representing the membership; to which meeting sole power is given to adopt and amend by-laws, and to elect the chief officers of the order, and in which the term of no officer so elected shall be longer than until the next regular session of such governing body." Both the law and the constitution of the congress distinguish sharply between assessment and fraternal societies. A fraternal society may adopt an assessment system of benefits, but it must, in addition, possess all the other fraternal elements; while an assessment society does not necessarily incorporate one or more of the fraternal characteristics. A fraternal society may consequently be an assessment society (until after the general adoption of level or step rates), but a pure assessment society is not a fraternal society. In some states special laws have been enacted to govern old line, assessment, and fraternal insurance organizations, respectively.

Any society coming within the description just given, but organized under the laws of another state, may be admitted to a state having adopted the uniform law, by appointing the insurance commissioner as its legal representative, and filing its charter, constitution, etc., for which a small fee is charged. Societies of other states, on application, may be examined by the insurance commissioner at a cost not to exceed \$50, in certain cases. The president of the last congress, in his annual report, favors a graduation of fees for examination, varying from \$100 to \$500, depending upon the membership of the society examined. That the limitation of fees to be paid to examiners is necessary, the experience of one large order demonstrates. This society uncomplainingly paid \$2,307.40 for an examination made, at its request, by the insurance department of one of the states. Not long after, the officers of another state appeared, to make a similar examination. When

told of the thorough examination recently made by the officers of a different state, the society was informed that such an examination could not be accepted by the department of this state. A second examination was made, for which the society paid \$1,615.50. Irrespective of the merits of these two examinations, it is evident that in such damnable iteration lies a real evil which the law should remedy. A single thorough examination by competent men ought to be sufficient to satisfy every insurance department. The law allows a larger fee for the examination of societies which have a reserve fund,—the uniform bill providing that any fraternal beneficiary association may create, maintain, disburse and apply a reserve or emergency fund in accordance with its constitution or by-laws. The proposed law calls for an annual report to the commissioner of insurance, embracing twenty five items. Such report shall be in lieu of all other reports required by any other law, thus doing away with the objectionable multiplicity of reports. The twenty five items in the report, taken collectively, are sufficiently comprehensive in their scope to give the officers of the state an intelligent view of the condition of the organization submitting the same. However, the commissioner of insurance is authorized to address any additional inquiries to any such organization in relation to its doings or condition. or any other matter connected with its transactions. incorporation of new societies is provided for; and the employment of paid agents, except in the organization or building up of subordinate bodies, is prohibited. The present laws of several states contain an absurd provision making the employment of a paid agent a chief test of the fraternal character of the organization. It is needless to add that the employment of any agent, paid or unpaid, to solicit insurance for an organization which does not provide insurance which is absolutely sound should be forbidden. That provision of the proposed law which makes a contract invalid if the beneficiary agrees to pay the dues of the member is of doubtful utility, because numerous instances may arise in which such a course of procedure would be beneficial to both parties. The usual penalties are imposed for violations of the law; methods of judicial procedure are described; and all previous laws inconsistent with the act repealed.

The National Fraternal congress has repeatedly been mentioned. Without fear of successful contradiction, one may say unhesitatingly that no other factor in the fraternal world to-day approaches in its importance the national congress. A careful study of the proceedings of this body will convince the student that from first to last it has stood for enlightened and progressive measures which have long begun to bear fruit in the reforms which have resulted from them.

The idea of such a congress originated in the state of New York, where the local societies had organized a state federation for the promotion of their own interests. In response to a call issued by the Ancient Order of United Workmen, the father of modern fraternalism in the United States, a convention of representatives of fraternal societies was held in Washington. D. C., in November, 1886. This organization session included delegates from seventeen orders with an aggregate membership of 535,000, carrying insurance to the amount of 1.200 millions. The latest congress embraced forty seven orders with an aggregate membership of 2,668,649, carrying insurance to the amount of 4,021 millions of dollars and having paid over thirty eight millions in benefits during the year. These statements reflect the magnitude of the interests centered in the National Fraternal congress. The objects of the congress, as defined in its constitution, are declared to be the uniting permanently of all legitimate fraternal benefit societies for the purposes of mutual information, benefit and protection. Representation in the congress is graded according to the membership of the respective societies. Eligibility for membership on the part of a society is contingent upon meeting the requirements of the definition of a fraternal society, contained in the uniform bill discussed above, which, in turn, is but a modified statement of the distinctive features of a fraternal benefit society as enumerated in a clause of the constitution of the congress from the time of its organization. Membership in the congress further involves the payment of an annual fee, varying from thirty five to one hundred and fifty dollars. constitution institutes the usual set of officers with customary

duties, and establishes seven standing committees dealing with the constitution and laws, statutory legislation, credentials and finance, statistics and good of the orders, fraternal press. jurisprudence and medical examinations, respectively. powers and duties of these committees are also defined. Finally, the constitution repudiates the speculative societies. whose chief aim is to pay sums of money to members during life, without regard to distress or physical disability; and declares that the aims of such societies are entirely opposed to the principles upon which the fraternal beneficiary societies are founded, and by virtue of which they exist. The congress meets partly in sections, the two chief sections being the medical and that on the fraternal press. The latter, by unifying and uniting the interests of the various fraternal publications. is capable of diffusing the knowledge which is essential for the permanent establishment of a sound understanding and the full recognition of true conditions. The former has been aiming at the improvement of medical selection. The personal element being so important in the fraternal system, greater care and efficiency in the selection of risks reacts favorably upon the personal habits of members. A thorough medical examination as a necessary preliminary for participation in a system of benefits is a valuable lesson in right living. A bureau of information has also been proposed and discussed. The helpfulness of such a bureau can scarcely be overestimated. for, as a whole, the system is suffering from want of sufficient and accurate information. Not until the accumulated experience of fraternal societies has been scientifically formulated and applied to their financial operations can fraternal insurance be said to have reached the dignity of an economic institution. One society has adopted the combined experience of four other orders, until its own experience may have become sufficiently comprehensive. This is correct in principle, and will tend to banish the grotesque systems of guess work which at present are altogether too common.

GROWTH OF SECRET SOCIETIES.

BY WILLIAM WALLACE PHELPS.

[William Wallace Phelps, attorney; born Red Wing, Minn., 1869; educated at the University of Michigan and Yale university, graduating from the law department of Yale in 1894, since which time he has been engaged in the practice of law; has made a thorough study of secret societies, their history, methods and influence upon American life. Author of many articles, especially on legal topics.]

Every fifth man with whom you shake hands in the United States is a member of a secret organization, counting out his possible college fraternity.

Ten years ago a liberal estimate was one man to every

eight in secret orders.

At the present rate of growth in the United States the present ratio of one to five may be three to five in 1914. For in the United States, where the population increases one tenth in a decade, the figures of the secret societies in ten years have been almost doubled.

In the year of 1904 the figures of the secret orders, reported by the central organizations, show a membership of 7,414,173.

In 1894 these figures, reported in the same manner,

showed a membership of only 4,126,375.

Thus while the population of the United States was increasing a possible 20,000,000, the memberships in the secret societies were increasing nearly 3,300,000—a virtual doubling of these memberships.

Considering these figures for ten years in their application to the whole country, there is a striking comparison in the statement that in the last year in Illinois the increase in the memberships of masonic lodges is greater than ever before in

the history of the state.

A tabulated statement of the memberships in secret societies for 1894 and for 1904 shows in detail where these gains have come in for the secret orders. The table is not complete as to all organizations in detail, but the sums in total are as nearly correct as may be possible:

	1894.	1904.
Oddfellows	746,484	1,193,749
	722,333	965,000
	413,944	562,327
Ancient Order of United Workmen	325,000	460,000
Junior Order of United Mechanics	175,000	116,106
	153,550	334,495
	129,128	52,000
Royal Arcanum	143,368	277,974
Ancient Order of Hibernians of America.		145,000
Ancient Order of Foresters of America	115,000	221,974
Knights of the Maccabees	96,338	350,441
Knights and Ladies of Honor	73,000	73,000
Modern Woodmen of America	85,617	711,923
Sons of Temperance	67,603	34,789
American Legion of Honor	62,303	01,100
Order of United Mechanics	50,464	43,582
Ladies of the Maccabees		130,268
Knights of the Modern Maccabees		115,522
Knights of Columbus		98,000
Ladies' Catholic Benevolent association		87,400
Knights of the Golden Eagle		70,000
Tribe of Ben Hur		68,813
Woodmen of the World		217,000
Knights of Malta		27,000
Equitable Aid union	37,460	
National Union	34,678	67,223
Royal Templars of Temperance	27,311	
Order of Chosen Friends	41,274	
Catholic Mutual Benefit association	38,000	62,000
Benevolent and Protective Order of Elks		154,000
Catholic Benevolent Legion	32,000	38,286
Ancient Order of Foresters	30,428	38,789
Independent Order of B'nai B'rith	30,000	30,000
Brotherhood of Railway Trainmen	25,000	* * * * * * * * *
Catholic Knights of America	24,000	
Order of United Friends	20,164	
Order of the Golden Cross	20,275	* * * * * * b *
United Order of Pilgrim Fathers	15,600	
Ancient Order of Druids	15,000	
Improved Order of Heptasophs	15,217	57,255
Order of Eagles		67,000

Court of Honor		66,449
Protected Home Circle		55,000
B'rith Abraham Order		42,781
Brotherhood of American Yeomen		37,684
		37,400
Independent Order of Foresters		220,000
	14,996	33,361
	11,055	
Smaller organizations 1	90,000	361,592
Total	26,375	7,414,173

Some of the societies not mentioned in the reports ten years ago are shown in the reports of the present year as having large memberships, while some of those making a showing at that time have disappeared altogether. At the head of the list, however, the Odd Fellows, the Freemasons, and the Knights of Pythias show where nearly 1,000,000 of the increase in

memberships has come.

Other fraternal organizations have outgrown these pioneers in secret orders. With the accentuated insurance features of many of these, however, the comparisons are lost in great measure. Figures for the Modern Woodmen of America indicate a growth of more than 600,000 in ten years; the Independent Order of Foresters is listed for the first time with 220,000 members; the Woodmen of the World show 217,000; the Knights of the Maccabees show 160,000; and the Improved Order of Red Men nearly 200,000, while in the grouped smaller organizations the increase is nearly 200,000 in ten years.

These phenomenal growths in secret societies in America probably will appeal as strongly to the anti-secret society element as they can to the secret orders themselves. Masonry, as one of the oldest of these orders, has been the target for attacks, criticisms, vituperations, and exposes, beyond the records of any other secret body. But its figures of growth are second only to those of the order of Odd Fellows. This growth, too, has been in the face of the admonition to all members of masonic orders that they shall not invite any man to

become a mason.

This admonition is as binding as a law, said Banker Leroy A. Goddard, grand treasurer of the grand lodge of free and

accepted masons of Illinois and the high priest of the royal arch masons of the state. Did any mason ever ask you to join his lodge? I think not; you might ask a hundred outsiders anywhere in the city and hear the same negative answer. Yet in view of this statement, the lodges of Illinois have shown a net increase of 4,254 members for the year ending on June 30, while the gross increase over all deaths, withdrawals, and expulsions is 7,455. At that date, too, the total membership for the state was 70,921.

For this phenomenal growth in the last year it would be hard to give a material reason; that is, a reason showing causes over another year's figures. Good times always has its influences upon new memberships, just as it influences other actions of men where money is to be expended for any purpose. But it may be said that ever since the Civil war the growth of masonry in this country has been steady and without a hitch.

There is no other reason at the bottom than that masonry is holding out something to men which they can not get anywhere else. It is the unspoken influence of the individual mason which impels the man outside the organization to ask to come into it. This individual, in seeking so come in, will be called upon for witnesses to his good character and to the good motives prompting him to seek entrance into the order. Two men at least will have to testify to these qualifications, and when these have testified, a committee takes up the question and passes finally upon the merits of the candidate.

The greatest critic of masonry will not find ground for questioning the manner in which masonic memberships are acquired. And it may be said that when a lodge has been formed, its memberships will rank with any similar order or brotherhood in existence. There are 732 lodges in Illinois, for instance, and at the annual meeting of the grand lodge there are virtually 1,000 delegates to it, gathered into the hall. In the personality of these men there is no governmental body in the United States that will overshadow these delegates in character and intellect and genuine democracy.

There is no caste spirit in masonry, and to this extent the mason in his lodge rooms is in an atmosphere that he can not find anywhere else. Out in the world, in any walk of life, he

feels the competition of caste, and wealth, and place; in his lodge a mason is a mason, neither better nor worse than another. No member could say, "I am better than you," for the reason that there is no call for such a feeling, to say noth-

ing of its expression.

There are benefits in material ways in memberships in the masonic order, but they are benefits so wholly incidental that they fade into insignificance compared with the moral and spiritual benefits. So clearly is this recognized in the order, and so vital is the principle, that any candidate suspected of counting upon these material advantages would be denied admission to the society. Death benefits and relief to the widowed and the orphaned grow out of the brotherhood when brotherly sympathies have been awakened. They are not things to induce brotherhood as a mere means to a selfish end.

It is recognized that the growth in all secret orders in this country in the main has been steady and large. Without taking to masonry too much of the glory possible to the conditions, I would say at the least that the influence of masonry has been reflected in every one of these secret orders. Since the eighteenth century the influence of the organization has been felt among men. Attacks of all kinds have been made upon it, but it has grown steadily in spite of all. To-day, if a man would know what masonry is, let him judge by the masons.

PRINCIPLES OF REFORM IN PENAL LAW. BY CHARLTON T. LEWIS.

[Charlton Thomas Lewis, lawyer; born West Chester, Pa., February 25, 1834; prepared for college at West Chester High school; graduated Yale, 1853; studied law 1853-4; studied for Methodist ministry, 1855-6; professor of languages, Illinois normal university, 1856-7; professor mathematics Troy university, 1858; Greek, 1859-62; U. S. Deputy commissioner of internal revenue, 1863-4; practiced law in New York, 1864-70; managing editor New York Post, 1870-1; secretary and treasurer New York Chamber Life Insurance, 1873-7; practiced law in New York since 1877.]

Copyright 1903 by American Academy of Political and Social Science

The traditional methods of dealing with crime and the conceptions and habits of thought which sustain them form a stronghold of conservatism. To attack it is to meet the reproach of devotion to mere theory and abandonment of practical good sense. It is time for reformers to show that the reproach properly falls upon prevailing notions and practices, and that there is a pressing necessity for a scientific study of the subject in the light of human nature and of experience. Penal law as it exists has grown out of the theoretic study of crime as an entity. Its proper basis is the practical study of criminals as men. Its lack of a controlling principle is not merely a fatal defect in its theory, but makes it, if not valueless, of very imperfect utility.

The end in view in society's dealing with crime should be its own protection. The ideal to be held before it is the elimination of crime. This aim is already recognized in many branches of law and administration as a potent motive. police system is organized for the prevention of crime. lic education is largely supported with the same end in view. Many costly institutions, such as houses of refuge, protectories and juvenile reformatories, are maintained by the state mainly in the hope that characters tending to criminality may be diverted to true citizenship. But the general system of dealing with actual offenders against the law has been framed with no such definite purpose. It has gradually grown up by the assumption on the part of organized society of the right of retaliation, modified more and more by a superficial conception of distributive justice. Our penal law now undertakes to assign to each offense a punishment proportioned to its demerits. The fundamental principle of any reform must lie in doing away entirely with the conception of a scale of desert among offenses, and in substituting for it harmonious and consistent methods of dealing with each criminal, as the interests of society demand. Instead of undertaking the impossible task of inflicting just punishment for past acts, the law must seek to insure the avoidance of unsocial acts in the future.

Thoughtful minds have been profoundly stirred in recent years by the obvious failure of our penal laws to suppress or diminish crime. Some of the causes of this failure are obvious. and efforts have been made in many jurisdictions to remove these by special laws or detailed amendments to existing codes. But these efforts have been largely fitful and experimental, not being founded upon any comprehensive principle inspiring the entire policy of the state. Among the obvious abuses of penal administration to which attention has been widely directed. the most conspicuous is the prevalent system of county jails. In the local prisons, for the detention of minor offenders and persons awaiting trial, the amelioration of conditions during the last century has been less marked than in any other public institutions known to our civilization. In 1827 the Reverend Sydney Smith wrote: "There are in every county in England large public schools, maintained at the expense of the county, for the encouragement of profligacy and vice and for providing for a proper succession of house breakers, profligates and thieves. They are schools, too, conducted without the slightest degree of partiality and favor, there being no man (however mean his birth or obscure his situation) who may not easily procure admission to them. The moment any young person evidences the slightest propensity for these pursuits, he is provided with good clothing and lodging and put to his studies under the most accomplished thieves and cut-throats the county can supply." These conditions have been largely changed in England, but they prevail to a surprising extent to-day in a majority of our states. It is a very general practice to pay the sheriffs or other officers in charge of the jails by a daily allowance for each prisoner, nominally for his support, but large enough to insure a substanial profit, so that the absolute master of the unfortunate inmates for the time being

has a direct pecuniary interest in keeping them as long as

possible in confinement and in feeding them cheaply.

These jails are now the chief schools of crime and the great recruiting offices for the army of criminals. There are few habitual criminals but have been educated in them. In some counties there is no proper separation even of the sexes; in very many there is none between the convict and the accused, or even the witnesses under detention; between the professional burglar or thief and the unruly boy. In nearly all, the inmates are chiefly idle. These monstrous conditions are maintained by the local authorities, mainly on the pretext of economy, in violation of the explicit laws of many states. They are attracting much attention, and in special instances have been mitigated. The fee system in the jails, too, must soon pass away. Reformers generally believe that all jails must be brought under the direct control of the state. Certain it is that the local jails in Great Britain, which were no better than ours before 1878, when they were brought under the centralized administration of the home office, have been nearly freed from these evils. There has since been a large reduction of the number of inmates and even of the number of jails. There is reason to believe that the supply of criminals has been largely checked by the change. A similar centralization of control in our states would doubtless effect excellent results, if exclusion of political influences from the state prison authorities were assured.

But another tendency is at work upon our laws which is at war with all reform. Every student must recognize the pernicious effect of short terms of imprisonment for minor offenses. Apart from the corrupting associations of most local jails, confinement for a few days or weeks is demoralizing and degrading. It brands the prisoner as a jail bird, and embarrasses his future. He often comes out stripped of self respect, suspected and despised by others, and is driven permanently into crime. Such sentences have no tendency to reform the erring. They are dictated solely by the absurd notion that they are fit punishment for minor offenses. But the number of such sentences is very great. Our police magistrates and petty tribunals are busy inflicting them,

partly on rounders or habitual misdemeanants, frequently on the young who have for once impulsively or even inadvertently gone wrong. Now, while the uselessness and harmfulness of such sentences are well understood, and while the courts, under the pressure of public opinion, are increasingly loath to inflict them, the number of offenses to which they are

legally assigned is steadily increasing.

As society grows in complexity and the standard of social conduct is raised, there is a constant increase in the recognized obligations of the individual. New rights and new duties emerge, and the violations of them become new crimes. It is often observed that the improvement of public order and of the general conscience are marked by an increase in the number of legal offenders. For many acts are now prohibited as offenses upon which the laws were formerly silent. Thus the business of criminal courts and prisons may be greater than before, when there is much less of real or serious crime. It has even been suggested that the increase of crime becomes in this way a mark of advancing civilization. But the paradox is superficial, and turns upon an ambiguous use of the word crime.

It is a fact, however, that legislatures in their desire to suppress any practice which is pernicious or inconvenient are prone to define it as a crime, and to make it punishable by a term in jail. Thus New York, within five years, has added about thirty to the list of offenses which the penal code denounces as worthy of imprisonment. Any person who lends or gives to another a newspaper chiefly made up of police reports must be sent to jail for at least ten days. sells a cigar on Sunday, or eats peanuts in a religious meeting, or, being a nonresident, gathers oysters in the state, may be imprisoned for a few days or weeks. A multitude of acts which may easily be committed by mere inadvertence are made misdemeanors and may be punished by incarceration for any fraction of a year. The mother of a child whose eye is red from any cause, who does not at once inform a physician; the brakeman who couples a freight car after a passenger car; the citizen who advises his friend to leave the railroad service rather than wear a uniform; the layman who has an ounce of Vol. 10-17

ether in his pocket without proof that he had no intention of improperly administering it as an anesthetic; each of these is a criminal before the law. If such statutes are enforced, they confound the public sense of justice, and become intolerably oppressive. But they can not be generally enforced, and their empty threats of severity bring law itself into contempt. The constant increase in the list of such offenses, however, adds materially to the number of moral and social victims of the

local jails.

In our modern penal codes, imprisonment has become the usual mode of punishment for almost every crime. The old fashioned spirit of vindictiveness which dictated the infliction of suffering upon offenders has passed away under humane influences. The whipping post, the pillory, mutilations of various kinds, have been superseded by terms of imprisonment, and the tendency of what is called scientific penal legislation is more and more to limit legal penalties to confinement of more or less severity and of greater or less duration. The question of what value there is in imprisonment, therefore, is of pressing importance, yet it can not be said ever to have been satisfactorily investigated.

If imprisonment on the whole does good, it must be either, first, as a just retribution, the infliction of which satisfies the moral sense of the community; or, secondly, as disarming the enemy of society and so protecting the community against him; or, thirdly, as tending to the conciliation of the character at war with men, by making him fit for citizenship. A proper study of the subject will address itself to the actual efficiency of imprisonment as an agency for each of these three purposes.

The conception of just punishment, though loosely held and associated vaguely with other ideas, is doubtless the foundation of penal law in the minds of most men. Incidentally it is at times insisted that the chief practical value of punishment lies in its deterrent influence. The fear of the penalty is supposed to prevent crime. This consideration often influences legislation, and sometimes shapes the sentences passed by courts; but all experience has shown that the real deterrent effectiveness of even the severest penalties is insignificant in its influence upon the volume of crime at large. In fact, it is

hardly felt at all except by habitual criminals, and then mainly in determining them to avoid crimes which are easily detected. Upon offenses of sudden impulse, and upon the whole class of crimes which are first steps in a downward career, the threat of

punishment has practically no influence.

But the avowed purpose of every criminal code is to apportion penalties according to the demerit of offenses. If the attempt to do this is a failure the entire system must be rejected as valueless. Now there is no superstition in the range of human thought more empty and unfounded than the belief that any penal code does or can assign punishments in any fair measure proportioned to the desert of offenses. The most superficial comparison of the codes of different states and countries will show, not only that no rational principle controls the actual assignment of penalties, but that no such principle can be found. Who can measure the comparative merit of offenders by the names of particular acts which have been proved against them? The attempt to do so in legislation results in the most surprising inconsistencies. For example, as maximum penalties, Virginia inflicts six months' imprisonment for incest, and eight years for bigamy, but Colorado assigns twenty years for incest and two years for bigamy. The guilt of forgery is to that of larceny as four to one in Kansas, and as one to four in Connecticut. The actual average sentence inflicted in Maine for perjury is one year, but in Florida it is ten years. The average sentence for robbery in California is one year, in Alabama it is twenty two years. man who in New York carries ether in his pocket, without proof that his intent is innocent, has precisely the same punishment denounced against him by law as the man who is guilty of incest or the man who attempts by poison to kill another; a penalty twice as great as is provided for the forger of stamps, the bigamist, the blackmailer, or the seducer under promise These illustrations might be multiplied. There of marriage. is not a page of any penal code in Christendom which does not suggest difficulties and embarrassments in the adjustment of punishments to crimes which are entirely insuperable. No rational purpose can be served by such a system. It is but the inertia of tradition and habit which preserves it.

It being evident, then, that the conception of penal law as a system of just retribution is without validity and without utility, it remains to consider what service, if any, the practice of imprisonment renders to society. It must be admitted that life in confinement and cut off from association with others is unnatural. A long period of complete subjection to the will of others and without individual initiative, results. except for characters of unusual strength, in a paralysis of will. Nothing can unfit a man for society so surely as cutting him off from all society. It is, therefore, a first principle of reform that only necessity can justify imprisonment. A person who can be at large with safety to others ought never to be subjected to a term in prison. If it is unsafe for the community that he should be free, he must be confined; but the duration of confinement must be determined by the duration of the necessity. In other words, the only rational system of imprisonment is that which limits its application to those who can not be trusted in freedom with safety for the rights of others, and all such should be subjected to such influences as will, if possible, prepare them for freedom, and released when they have given satisfactory evidence that confinement is no longer necessary. This is the great principle of the indeterminate sentence, which is the recognized basis of reform legislation in many of the states of the union; but it has been as yet timidly and imperfectly embodied even in the foremost penal codes. One of its most valuable features, to which too little attention has been directed, is that it leads to the permanent seclusion of the irreclaimable. If crime is ever to be extirpated, society must be resolute in its dealings with habitual and professional crimi-Any system which treats a recognized enemy of human society on the basis of a single act, and fixes, in view of that act, a definite term at the end of which he must be freed, to prey upon his fellows, is a foreordained failure.

It must not be disguised that these principles will necessarily lead to a large disuse of imprisonment. A growing sense of the evils which follow the practice, and especially of the fact that prisons and jails are the channels of supply for the criminal class at large, has already pressed strongly upon thoughtful men the necessity of finding a substitute for con-

finement. The probation laws of Massachusetts and of several other states have made an important beginning in this direction. It has been found that multitudes of the young, who have seemingly set out on the way to a criminal life, can be diverted from it and made decent citizens, if instead of the contamination and weakening influence of imprisonment, they are subjected to proper moral and social supervision under the intelligent direction of the court. There can be no doubt that the future progress of reform in penal law lies very largely in the direction of extending the scope of probation laws. Indeed, supervision and guidance by wise agencies wherever they have been applied to those who are discharged after a term of imprisonment, have been found at least as valuable in their reformatory influence as the best systems of discipline and education within the walls of institutions. The more efficiently such supervision can be exercised, the more successful will be our campaign against crime; and it is not too much to hope that in the progress of civilization the community at large will take, not only a deeper interest, but a progressively more active and useful part in this supervision.

EVOLUTION IN REFORMATORY METHODS.

BY LYMAN D. DRAKE.

[Lyman D. Drake, superintendent of the Iowa industrial home for boys, has been in charge of that institution since 1904; previously he was for sixteen years head of the manual training school at Boonville, Mo.; Mr. Drake's theory is that the delinquent juveniles should be taught useful trades, and he has put these theories into practice by teaching such trades to more than 1,000 boys who have been under his direction.]

Time writes many changes and has written them rapidly. This is true of institutions for juvenile delinquents, and the methods being pursued at present compared with those of the incipient days of so-called reformatories impress us with the

rapid strides being made in this progressive age.

Questions of economics and others of equal importance have claimed much of the best thought, and not until within the past quarter of a century has the social problem claimed more than passing attention and the scientific research necessary to the securing of best results. The achievements in this particular have been scarcely less than those attained by the arts and sciences. Each stimulated to greater activity in consequence of some material advancement, so that to-day in our retrospection we are filled with joy and satisfaction at the sight of nearly one hundred magnificent institutions, which are devoting both time and energy to the restoration of the delinquent children of our land.

We must begin our investigation by going back to the seventeenth century, when the San Michale at Rome held the juvenile for restraint without thought for the welfare of the youth other than his confinement. Conditions did not improve with the establishment of other institutions, and not until late in the eighteenth century did the institutions of England and France of a similar character show any improve-

ment.

Early in the nineteenth century there came a ray of light and hope to the delinquent boy and girl, and this must be attributed to the wisdom of Dr. Wischern of Hamburg, Germany, who created Das Rauhe Haus in the year 1833, this institution being the first of the open institutions for the detention of juvenile offenders. The first institution founded in the United States was the result and consummation of a corporation organized in the city of New York. This was in the year 1824, and the institution above referred to afterward became the House of Refuge now located on Randal's island. In this house of refuge dependents, defectives, and delinquents were alike confined. Cellular confinement seemed to be the one idea; and while there was apparently sufficient philanthropic zest upon the part of those in authority or control, one can scarcely reflect upon such action without a shudder.

Massachusetts soon followed with the establishment of an institution which presented conditions somewhat more favorable to those confined within its walls. Not long afterwards Ohio took up the inspiration and in the year 1855 a commission was appointed with instructions to visit the German institution near Hamburg. Upon a thorough investigation they returned and in their report recommended to the general assembly of Ohio the establishment of an open or cottage system to be known as a reform farm school for the reformation of refractory youth, with some modifications, however, upon the German idea. We here note the first appearance of the word school attending an institution for the correction of juvenile delinquents. Changes are rapidly taking place, each year adding something of benefit. The idea of cellular confinement has given place to that of education and occupation. While there were many things in those institutions that did not reflect upon them a very considerable credit, yet the primitive idea was giving way to methods more advanced and beneficial. Still in this particular they appeared more than a century behind the achievements of our modern methods, which have made it possible for over thirty thousand boys and girls to enjoy the benefits of an expenditure of more than twenty five millions of dollars.

I alluded to the spirit that actuated the establishment of our institutions in earlier days by men of strong intellect, and possessed of such qualities as characterized them as being best fitted for the work undertaken; yet should I narrate incidents which were actual facts connected with institutions under their supervision, you would be disgusted with the very thought, and regard the word reformatory as a misnomer. Within my own experience I have seen boys who were fed much after the manner you would feed dumb brutes. I have seen meats in a decaying state, intended for their food, cooked and thrown into a large pan in the center of a table, and after a display of civilization, insomuch that a pretense of asking the blessing was made, where the boy would cover his face with his hands, yet all the while looking through his fingers with his eyes fixed upon a piece of this flesh, waiting for a signal when all who were so fortunate might get his hand into this much sought-after pan and gather to himself something whereby his hunger might be appeased.

I have also followed, with silent tread, a line of woe-begone fellows wending their way to a basement to partake of bread and water, this having been measured out to them as a punishment for some infraction of the rules of the institution; and the length of stay in this basement or the number of meals of bread and water depended upon the gravity of the

offense committed.

I saw a man who bore the title of officer subordinate in authority only to the superintendent, with a heavy cane in his hand, deal blows that would render his victim unconscious. I have seen boys placed in confinement for weeks at a time and fed upon bread and water, while their quarters were so infested with vermin, that their minds gradually gave way under the strain. I have also seen the stocks used as a punishment, compelling the boy to sit in a broiling sun, with feet and hands pinioned, not being able to move them—and all of this taking place within the last quarter of a century in the midst of a socalled Christian and philanthropic people. Do you wonder at the delight occasioned at the dawning of a new era? So on through the years we are witnessing a gradual change from those methods which would be regarded as barbarous to the modern, well equipped, well managed, industrial training schools of to-day. While it has been distressing to me to furnish so painful a picture, yet another may be seen that brings joy to the heart and an inspiration causing us to go forward in this great work of uplifting humanity.

The cellular idea as heretofore referred to, has given place

to the cottage or home idea, where the neglected boy may enjoy the comforts and blessings of life that attend right living and right doing. An institution to-day without its schools and shops would be regarded with more or less suspicion. Our modern institution surrounds the boy with advantages second to none. His education in the school of letters is carefully looked after, he being under the instruction of capable, painstaking teachers, who devote their entire time to his welfare, and many institutions make education the standard by which he may secure his release from the institution; the purpose being to give every boy a good, common school education.

I am impressed, however, with this idea, that in order to have a well rounded man, we must have a well trained boy, one whose hands have been taught to work in harmony with his mind, becoming skilled in some useful occupation. In the years gone by, the primary consideration of a reformatory institution was to create some sort of occupation that would bring to the state as great a revenue as possible. "How much can a boy be made to earn?" was the thought foremost in the minds of those in authority. Think of it. The boys of the state, the state's money invested in them, the state hoping at some future time to have a return for this, which should be its good citizenship, rather than to know they had by some revenue creating occupation been made to partially compensate the state for the money expended in their behalf. Such ideas are degrading and debasing, making the labor of the boy the primary consideration instead of his education and reformation. I am happy to state that such conditions no longer exist. and nowhere within the United States to-day can be found an institution where the labor of its boys is being contracted, as was a fact in the years gone by.

The state to-day is making a vastly different investment. Boys are still being placed in reformatory institutions; the state continues to invest her money in these boys. Why? because of the fact that to-day the returns are a sufficient guarantee to continue this, as from seventy to eighty per cent of all the boys sent to institutions for correction, go out into the world again reformed in the fullest sense of the term.

Boys have now at their disposal skilled instructors, those

who are interested in their development, assuring a proper training. The services of our institution boys are being sought after in consequence of the thoroughness of their training. State prisons are not recruiting from the ranks of reformatories to the extent that has been done in the past. The institutions of to-day are engaging the best thought and zeal of the body politic. They are at last awakening to the fact that delinquency is a factor injurious to the great social fabric, which in consequence of its contaminating influences has caused more or less of decadence. Psychologists, sociologists and anthropologists are using their utmost endeavor to eradicate the evil through research and application. To arrest the cause is now the slogan. They are now engaging in the study of man, and the many influences used in this direction must of necessity result in great good. Reformatory institutions are and will be strong factors in the improvement of the substratum from which comes so much to contaminate.

The advantages of an up-to-date institution are so many and varied that one scarcely realizes the importance attached thereto. While an institution may never receive the credit of giving to the world men of great renown, yet the foundation for a successful life may be laid; the individual to be the architect of his own success or failure. So many things come within the range of possibility, that we can not with accuracy judge the outcome of close application and attention to duty. A successful institution is measured by its system and method, both of which call for accuracy even in the minutest detail. This becomes more important as the youth is so susceptible of training; and where results are expected to be satisfactory, which is the outgrowth of impression, the necessity of perfect method and system becomes apparent.

The completion of anything undertaken without making the importance of such an undertaking fully understood is harmful rather than beneficial, as impressions here find a lodgment and govern the future life of a boy to a greater or lesser degree. Our institutions of to-day are noting well the significance of this and each year adds greatly to the success at-

tained.

There is nothing in my opinion so important in the educa-

tion and training of our youth as to teach them the nobility of labor. Those who have said, "The world owes me a living, and I am bound to have it," furnish this sad spectacle and to their own discomfiture. On the other hand, the honest toiler, who embraces every opportunity for self advancement by occupation and endeavor, can rise to a height which seems to be limitless in consequence of the ingenuity of the man who applies himself and ennobles labor. Our boys can have no better teaching than this, all of which will assist them to rise above the necessities of to-day.

That which tends toward the elevation of the boy will reflect itself in the man insomuch as the boy is said to be the father of the man. While the achievements of the nineteenth century were marked in a degree in the advancement of our institution methods and reflect the zeal and labor fraught with more or less anxiety, it furnishes our workers of the present day with an inspiration to try to accomplish even greater things for those who require their help. The changes from the old to the new methods are certainly gratifying and satisfactory. To see the walls, bars, dungeons, stocks and chains, which were regarded as absolute necessities in the years gone by, disappear, and in their stead cottages or homes for boys with parks, lawns, flowers and the handiwork of nature's beauties to be seen on every side, certainly reflects the intelligence and zealous efforts of an advanced civilization.

In conclusion, let me suggest what I might term a model reformatory: First, an institution created by a magnanimous people for the sole purpose of reformation and not profit. The cottage system to be taken as the basic principle in its broadest sense. Boys to be carefully classified; congregating those only of like temperament, not to exceed thirty boys in a cottage; presided over by trained men and women, a living example worthy of the emulation of every boy; devoting their best thought and energy to the individual boy, transforming and reforming the crooked and gnarled into the symmetrical and stately. The occupation of the boys to be of such a character as may be best suited to the boy and his probable surroundings after returning to his home, with the military, music, and as many other influences as would feature the

institution, depriving it altogether, although an institution for juvenile delinquents, of a semblance of that which partakes of a penal institution. With athletics as prominent as is made by the highest and best institutions of learning throughout the land. With such inviting surroundings, boys would live in an altogether different atmosphere, dwelling in a refreshing sunlight, which, in my opinion, would be absorbed by nearly the entire population, and only those who from hereditary tendencies would be found upon the debit side of the

ledger when a final summing up was made.

Such an institution as above described, is in my opinion, a possibility. Much has been done; more may be done. A superior business system in the management of institutions. together with the coöperation of a generous people augurs well for delinquent boys and girls. It has been my observation all through my years of experience that the reformation of boys is regarded with too little importance, the primary thought being to rid society of a boy whom they considered a menace. If investigations were made leading to the cause for the necessity of such restraint, society would in all probability be found responsible. The neglect of the child has led in a majority of cases to its delinquency. It is difficult to appreciate the necessity for the proper supervision of children unless the matter be made a personal one. When it concerns our immediate family, our interests become intensified and we wonder why conditions which have lead to certain effects have not in some way been counteracted before such injury was sustained. The world has been too busy with affairs of a vastly different character, and, as they are pleased to term it, of more importance. Does it occur to you that there is any thing more important than the saving to society of a human life? Were this question given the attention it merits, conditions would ere long show a greater improvement. People, generally speaking. are too unfamiliar with our institutions. The boys who go from them attract no particular attention. The good boy is never spoken of; the bad boy soon claims greater prominence than he deserves, and the school suffers accordingly. public should be held responsible for this feeling, as their attitude toward the youth emerging from our institutions is such as to make them feel that they are living in a disgrace that can not be overcome. We plead for charity, yet how uncharitable! We ask for justice, yet how prejudiced we are, all of this having a tendency to destroy our labor with the boy.

In this era of progress and reform may there not be more expected from the layman, giving inspiration and zeal to those whose lives are given to the work of scattering roses instead of

thistles along the pathway of the unfortunate.

THE RACE PROBLEM AT THE SOUTH.

BY HILARY A. HERBERT.

[Hilary Abner Herbert, ex-secretary of the navy; born Laurensville, S. C., March 12, 1834: educated in the universities of Alabama and Virginia; admitted to the bar and practiced at Greenville, Ala.; captain and colonel of the 8th Alabama volunteers U.S.A.; located in Montgomery, Alabama, in 1872, and resumed law practice; member of congress, 1877-93; secretary of navy, 1893-7.]

This is a land of free speech. Americans may now discuss any where, north or south, even their negro question in all its bearings. This it has not always been easy to do, even in the historic city which claims the proud distinction of being the birthplace of American liberties. In 1859 George William Curtis became temporarily a hero by an antislavery speech in Philadelphia. A mob had gathered to prevent him, but the mayor of the city, backed by the police, succeeded in protecting the speaker, who delivered his address in spite of the missiles that were hurled into the room where he spoke. The next year, however, so violent were the passions of the day that the friends of that great orator could not hire a hall in that city for Mr. Curtis to lecture in, even on a subject totally discon-

nected with the negro, or with politics.

In those days the negro question was full of dynamite. because we then had in this country two systems, I might almost say two civilizations, one founded on free and the other intimately interwoven with and largely dependent upon slave labor. They were in sharp conflict with each other, and therefore it was that free discussion of the slavery question, or negro problem, was then sometimes difficult at the north, while it was every where impossible in the south. Abolition sentiment was proclaiming in the north that slavery must go. no matter at what cost. In the south, therefore, the stern law of self preservation demanded the rigid suppression of free speech on this question, lest discussion should incite insurrection, and light the midnight torch of the incendiary. In the north the motive of the mobs which, like those who gathered around Mr. Curtis here in 1859, and who called themselves union men, was to prevent abolition speeches because they saw in them disunion or civil war, or it might be both civil war and disunion. The civil war came; it was terrible—more terrible than dreamer ever dreamed of. But it is over, and there will never be disunion; no one fears it now, because now no one desires it. Slavery is dead, and can never be resurrected. So, therefore, there is now nothing to hinder free speech in our country about the race problem in the south. If in 1861 there was dynamite in the negro question, so when that dynamite had exploded, and when states had been wrecked and social and economic systems shattered, the problems that grew out of the negro question were quite as exciting when up for discussion as had been slavery itself.

The most acute form in which this many-sided question then presented itself was suffrage, and every student now knows that political science played no part in its solution, that the reconstruction acts were passed and the fifteenth amendment was adopted when party spirit was more intolerant than it had ever been before, and the passions of war were still blazing fiercely. The constitution of the fathers was framed in Philadelphia after mature deliberation behind closed doors. The fifteenth amendment, changing that instrument fundamentally, was formulated after heated debate in congress, on the rostrum, and in the newspapers throughout the land. debating the question of granting suffrage by law to millions of ex-slaves, and then of clinching the right by a constitutional provision intended to secure it forever, whether it worked for good or evil, the fundamental proposition for consideration should have been the fitness of the negro. Was he intellectually, by training and antecedents, competent to take partoften a controlling part—in the great business of government? But the case did not turn on that point, the discussion was always wide of that mark. The nearest approach to the question of the fitness of the ex-slave for the ballot was this argument: Did not the government free the negro? Was he not the ward of the nation? Did not the government owe him protection? And how could he protect himself without the ballot?

This, though fitness was assumed without argument to

support it, is the most defensible of all the grounds on which the fifteenth amendment became part of the constitution. If the negro had only possessed the qualifications which political science tells us are essential in those on whose shoulders rest the burdens of republican government, with the ballot in hand he would not only have protected himself, but he would have given to the southern states, and he would have helped to give to the nation, the blessings of good government. But the fitness for the ballot that had been taken for granted did not exist. The political structures based on negro ballots, like the house of the unwise man in the Scriptures, fell because they were builded upon sand.

Out of reconstruction and the fifteenth amendment have come many of the peculiar phases, and nearly all the aggravations which now beset the race problem of the south. In the days of reconstruction the teachings of political science as such, and of ethnology, its handmaid, had made but little impression in America. Political science had been taught, it is true, in William and Mary college, to Jefferson and other Virginia statesmen prior to the Revolution, and there were, prior to 1860, in a few scattered American colleges, solitary professors lecturing occasionally on the subject, but great schools of

political science are of recent growth.

As our country expands it has need for wider knowledge. It is dealing now not only with its negroes in the south, but with Cuban and Porto Rican and Philippine populations, and it needs not only accurate knowledge of all these peoples; but, facing as we do a future that will bring to us questions as momentous as they will be novel, the time has come when we must search carefully for and familiarize our people with the lessons of our own history, that our experience may be a lamp to guide our feet. A few years ago Professor Cope, the great naturalist, made a notable contribution to the discussion of the race problem. It was a series of articles published in the Open Court, discussing, from the standpoint of a naturalist, the differences between the white man and the negro. He showed the inferiority of the negro, and contended that the mulatto was in many respects, which he carefully pointed out, inferior to both his parents. Then he left the firm ground of science on

which he was at home, and surmised that intermarriage would hereafter become common in the south. If this surmise should be correct, then there would follow, as he had proven, the destruction of a large portion of the finest race upon earth, the whites of the south. To prevent this result he argued that the government could well afford, whatever might be the cost, to deport all the negroes from the south. This admixture of the races, let us hope, will not take place, and deportation is impossible.

If these articles had been written and published in 1860 who can estimate the opprobium that would have been heaped upon Professor Cope and the University of Pennsylvania. But in the nineties the publication excited no comment. It was simply a scientific contribution to the discussion of the negro question. The day of free thought and free speech even on

our race problem had come.

So I am free to say that in my opinion the granting of universal suffrage to the negro was the mistake of the nineteenth century. I say that, believing myself to be a friend to the negro, willing and anxious that he shall have fair play and the fullest opportunity under the law to develop himself to his utmost capacity. Suffrage wronged the negro, because he could only develop by practicing industry and economy, while learning frugality. It was a mistake to tempt him away from the field of labor into the field of politics, where, as a rule, he could understand nothing that was taught him except the color line. Negro suffrage was a wrong to the white man of the south, for it brought him face to face with a situation in which he concluded, after some years of trial, that in order to preserve his civilization he must resort to fraud in elections; and fraud in elections, wherever it may be practiced, is like the deadly upas tree—it scatters its poisons in every direction. Universal suffrage in the south has demoralized our politics there. It has created a bitterness between the present generations of whites and blacks that had never existed between the ex-slave and his former master. Another crying evil that has resulted to the people of the south and of the whole union is that we now have an absolutely solid south, where the necessity for white supremacy is so dominant that no political ques-Vol. 10-18

can be discussed on its merits, and whites do not divide themselves between the two national parties. What we need in the southern states to-day, above all things, is two political parties, strong enough and able to deal with each other at

arms' length.

The negro's prospects for improvement, his development since emancipation, his industrial conditions, his relation to crime, the scanty results of the system of education that has been pursued, how that system can be bettered—all these questions as they exist to-day are before us. Here and there, among southern people, are some who in despair are advocating that no more money be spent by the whites for the education of the blacks. This, I am glad to say, is not the prevailing sentiment. The southern people, as a rule, believe that we should continue to strive for the development of the negro and the lifting of him up to a higher plane, where he may be more useful to himself and to the state.

THE DEVELOPMENT OF PUBLIC LIBRARIES.

BY CHARLES AMMI CUTTER.

[Charles Ammi Cutler, late librarian of the Forbes library, was one of the most famous of American librariaus, and his Rules for a Dictionary Catalog and his expansive classification are permanent contributions to library economy; born in Boston in 1837, he graduated from Harvard university in 1855, becoming assistant in the Harvard college library, librarian of the Boston Athenæum in 1869 and of the Forbes library in 1893; he was editor of the Library Journal 1881–93.]

Copyright 1902 by Evening Post Company

In the first year of the nineteenth century the United States, with a population of five and a third millions, had 64 libraries intended for popular use, or, if we call the parochial libraries founded by Dr. Bray public, and assume that most of them survived the Revolution, there were 100 libraries containing perhaps 50,000 volumes in all. In the last year of the century there were over 10,000 libraries owning 40,000,000 volumes, half of these libraries having over 1,000 volumes each. Thus, while our territory is less than four times as large and our population is only fourteen or fifteen times as large, there are one hundred times as many libraries containing eight hundred times as many books.

There is no means whatever of ascertaining how many volumes reached the readers of 1801, but it is unlikely that the output exceeded the stock, for it was a time of solid books and slow readers. In 1900, 50,000,000 volumes were issued; that

is, the circulation has grown a thousandfold.

Americans have always been a bookish people. The very first colonists brought books with them from Europe. There were books, few but prized, in many households, and in time some private libraries of size and fame. Public libraries have a history almost as old. The Puritans had hardly landed when they founded a college and with it a library. Harvard college library, born in 1638, was followed in 1700 by two others, Yale and William and Mary; and by twelve others in the following hundred years, so that the last century began with 15 college libraries. It closed with over forty times as many.

Joint stock libraries, implying cities and a certain amount of wealth, were of later origin. The first was founded in 1731

(twenty seven years before the first proprietary library was established at Liverpool, England). By the end of the eighteenth century there were 32 such libraries. There are many more now, for they spread gradually throughout the country, often under the name of atheneum in the cities, and of social library in the country. But they are not flourishing as a class, for the free public libraries are slowly ousting them. People in general will not pay for reading when they can have it for nothing. A few, either from old habit, or because they dislike the rush and bustle of a public library, or because membership is regarded as a social distinction, will frequent the proprietary library and pay their yearly dues, but the receipts from this source are too small for its whole support. With a large invested fund it may survive; without one it is doomed either to be dissolved or to be absorbed by the free library. In those states, to be sure, where the latter has not gained a foothold, the proprietary library continues its good work, and new ones may spring up. They are then very useful in showing the people what libraries are and in preparing the way for the adoption of permissive or compulsory library laws. Many were founded in the decade before and the decade after the Civil war; yet in 1896 only 57 were reported that had over 1,000 volumes apiece

The libraries of 1801 were small in a degree hard to realize, with our present ideas of necessary size. The oldest of them, Harvard college, had in 1790 only 12,000 volumes; the largest, the Philadelphia library company, after absorbing three similar libraries, had in 1807 only 18,391; in 1793 the New York society library had 5,000; in 1791 Yale college had only 2,700; in 1811 the Charleston society library had reached 7,000, and in 1809 the Boston atheneum, founded only two years earlier, could report 5,750. These were the giants; no other library had 2,500; not half a dozen had 1,000; the average was

500.

The character of the libraries was much more solid, or, if one pleases, heavy, than now—necessarily so, for the books of that day were in greater proportion serious. The college libraries were of course designed to be learned, for the use of the professors chiefly. In them theology naturally held the

leading place, as the colleges had been founded mainly to educate ministers. So in the Harvard college library catalogue of 1790, 150 pages out of 350 are filled with theology, 10 with the Greek and Latin classics, 4 with books of travel, but only three fourths of a page with periodicals. In literature, however, one finds Chaucer, Shakespeare, Spenser, Milton, Dryden, Pope, Gay, the Gentleman's Magazine, Rabelais, La Fontaine, Voltaire, Boccaccio. In 1765 Yale college was "well furnished with ancient authors, such as the fathers, historians, classics, many and valuable works of divinity, history, philosophy, and mathematics, but not many authors who have written within these thirty years."

The social libraries were different. The library company of Philadelphia, whose selection probably was largely determined by Franklin's taste, no doubt was imitated by other proprietary libraries. It had scarcely one theological book or controversial tract; politics was not prominent; history, travels, science, natural history, and especially the mechanic arts, formed the bulk of the stock (but it must be remembered that a dozen of our sciences and a score of our arts had no existence then). Polite literature was scantily represented, especially in the department of fiction, the library committee in 1783 having instructed its London agent that though not averse to mingling the dulce with the utile, they did not care to have him buy any novels—a rule which has largely prevailed since.

Art, which in the last decade has begun to fill so large a place on our shelves, was not to be found in any of the early libraries. The Boston atheneum, however, received in 1838 from a generous proprietor a large number of works of art, and became the pioneer of bibliothecal art development.

The character of the reading differed somewhat from ours. It was in larger proportion the reading of the man who is curious about some one branch of knowledge, or the reading of the man who in a general way wants to improve himself. Fiction, which supplies 75 per cent of the circulation of the modern town or city library, was not furnished by either the college or the association libraries. For that the readers went to the circulating libraries, which no doubt seemed to the Sir An-

thony Absolutes in this country, as they did in England twenty five years before, an evergreen tree of diabolical knowledge. But the proprietary libraries had been founded by gentlemen desirous of promoting the diffusion of useful knowledge and extending the means of information, and as Duché writes in 1774, "For one person of distinction and fortune there were twenty tradesmen that frequented the library." These men came there to learn. It may be doubted whether women frequented the libraries at all. Amusement, the culture of the imagination, the culture of a love and appreciation of beauty,

must have been very much in the background.

The next variety of library to be established was the mercantile, with which are to be joined the young men's associations, mechanics' institutions, and apprentices' libraries. They sprang up in connection with the marked educational movement of the second and third quarters of the century, were designed mainly for young men who could not afford to purchase a share in the joint stock libraries but could pay a small annual fee, and they usually had classes for evening instruction and courses of lectures. They were another step in cheapening knowledge. Like the social libraries, they flourished for a time, and are still useful where they have become solidly established, or in states where the free library system has not yet penetrated, but they are destined to give way in time to their powerful rival.

They had an effect probably not in the least contemplated by their founders. Like all libraries, they were continually in want of money; they obtained it by extending their membership beyond the merchants and clerks of the original plan to any one who would pay the annual fee. To attract the public, it was necessary to provide what the public wanted to read. Going into competition with the circulating library, they adopted its tactics, and the mercantile became as much lighter than the social as the social was lighter than the college library. So was the way prepared for the free public library, both by a lessened cost to readers and by a mitigated austerity

in book selection.

The inadequacy of these libraries for any thorough investigation compelled the formation of special libraries—his-

torical, theological, law, medical, scientific, oriental, and society. The century came in with five or six of these, and

closed with as many hundred.

The private libraries were intended for the owner and his friends; the college libraries for the professors and their students; the proprietary libraries for the stockholders and their families; the mercantile, at least primarily, for the merchants and their clerks; the other libraries for limited classes. So far there were none for all the people, and none free. But in the northern states all the people were beginning to want reading, and were rapidly becoming willing to tax themselves for it. With the second third of the century began a new era, which the little town of Peterboro, in New Hampshire, had the honor of inaugurating. At the instance of the Unitarian minister, a free library was founded in 1833 by an appropriation that has been continued annually to this day. Thus America became the birthplace of the free library, for the leaders of the movement, which resulted in the library law of 1850 in England, have said that they derived the idea from this country. But the town was in advance of its time. Thirteen years passed before another little town—Orange, in Massachusetts—ventured on the same step; four years later Wayland followed. Neither of these had any right to spend their money so, but their lawlessness was not rebuked, and perhaps contributed to the passage of the acts by which New Hampshire in 1849 and Massachusetts in 1851 authorized any town to tax itself for a free public library.

A Bostonian has expressed his surprise that Boston, a city with traditions of intelligence and education, gave no indications of considering this matter of free libraries till it was over two hundred years old. He might have added that she spent a long time in considering; there were eleven years between the first suggestion and the decisive action in 1852; but when she finally adopted the idea there was no hesitation in carrying it out thoroughly. She has ended by collecting the largest stock, erecting the costliest building, and for the first forty years having the largest circulation of any city in

America.

Nor is this all. The library was in the hands of men who

felt that this new creation had in it the potency of all libraries; that it might do the work of all that had preceded it and its own peculiar work besides. In other places some parts of a library's function may have been better developed, but nowhere yet has the happy combination of private and public liberality made it possible to at once so thoroughly suffice for learned research even of the specialist, gratify cultivated curiosity, please the bibliomaniac and the dilettante, foster idle meditation, or stimulate vigorous thinking, while yet not neglecting to meet every want of the general reader, even the want of amusement and illusion, and, more than this, to attract to itself and to train adults who have never been in the habit of reading at all and children who have not yet learned to read with profit. If in any way the library falls short, it has been in this latter work, which western libraries have taken up

enthusiastically and pursued most successfully.

Another class of free institutions had its origin a little after the town libraries. In 1835 a law of New York permitted each school district to tax itself \$20 to found and \$10 a year to maintain a free public library. But as the people would not tax themselves, the friends of the measure persuaded the legislature in 1838 to appropriate \$55,000 a year to purchase the books. Fifteen years later the libraries had over 1,600,000 volumes, but they were very little used, except in the cities, and the system was an entire failure. Eleven years later, after half a million more had been spent, there were half a million volumes less. A school district is perhaps too small a territory for a successful library, but the real cause of failure was that among a people who are not eager for it, reading will not take root except by wise management, and the charge of these libraries was in the hands of men who were not interested in them. A library always suffers when ruled by a school board—persons who, if not chosen for political reasons, are selected for their ability to administer an institution which has this only in common with libraries, that it is educational, but otherwise differs entirely in aims, personnel, material, and methods. In this case there was not even the safeguard of a librarian to look after the library's interests. The school trustees were often incompetent to select the books, and accepted any rubbish that booksellers might offer. Such libraries, of course, did not attract readers. In 1892 New York wisely separated school libraries confined to school use under direction of school authorities from town libraries for public use under direction of trustees.

The century's library history falls into two main periods, the first three quarters and the last quarter. The first was characterized by paucity, poverty, slow increase, slow development of purposes and methods, by conservatism, limitation, and restriction. The latter period shows an astounding increase in number and size, money given in an increasing ratio, library buildings going up all over the land, their suitability to their purpose improving, experiments making in administration, new channels of library influence constantly opening; the collection of books, though no longer considered the main object, going on more rapidly; the use of the books, now regarded as the supreme consideration, daily spreading in all directions. The causes of this luxuriant growth are many. Chief, no doubt, was the increase in population and wealth, which has at the same time led to the foundation of hosts of new libraries and quickened the growth of those planted during the first period. Another cause was the spread of education and culture, furnishing an army of readers, with awakened minds. But it is to the librarians that are due the enlarged ideas of the library's mission and the discovery of the quicker and more effective ways of working which, by doubling the reach and power of libraries, have strengthened their hold upon popular favor and reinforced their appeal for philanthropic support. The change began when a hundred librarians met at Philadelphia during the Centennial exhibition to exchange views and make one another's acquaintance. The librarian of 1876 was busy in his own library, and seldom heard what others were doing. There was little spread of professional ideas and no coöperation. The American Library association, which was the result of the Philadelphia meeting, and the Library Journal, founded at the same time, changed all that and brought improvement into every branch of library economy. A previous convention in 1853, though it promised well, came to nothing. The greater success of the meeting of 1876 was due in part no doubt to the ripeness of the time, to the elimination of the slavery question, to the greater culture of the nation, but mainly to the efforts of a small group of men who did not allow their interest to die out.

The essays by the leading librarians of 1876, published in a thick volume by the national bureau of education, the papers and discussions at the conferences, and the other matter that fills the 13,000 pages of the Library Journal, treat mainly of the five classes of subjects in which there has been the most progress—library establishment, the profession, the building, the management, and the methods of reaching the public.

The trend of opinion is toward libraries established by legislation, supported by taxation, helped as far as possible by private generosity, managed by their own authorities, free to all—the library of the people, by the people, for the people. Such libraries are coming into existence fast. To assist their establishment seventeen state library commissions have been organized, the first in Massachusetts in 1890. They work differently, according to the different needs of the states, but they all aim to fan library zeal where there are libraries, to arouse the desire for them where there are none, to distribute public aid to poor towns, and to encourage private giving everywhere. But legislatures should take one step and oblige towns to have and properly maintain libraries as they already require them to provide schools.

The old writers on library topics were always prone to enlarge upon the qualities needed by the librarian. They would have him in business a hustler, in learning a scholar, in book buying a critic—but a broad minded critic—in memory a Magliabecchi, in languages a Mezzofanti, in tact a Metternich, in administration an organizer and a disciplinarian, in temper an angel, and everywhere an enthusiast, for the librarian who is indifferent is lost. But such prodigies must always have been rare, and even they could not alone have met the demands of a modern library. He needs assistants. It was early seen by the association that the best work could be done only by specially educated persons; that librarians were constantly losing time in training new assistants; that libraries were continually checked in their progress while librarians without

experience were learning their trade, and that many were condemned to stagnation because the new librarian simply plodded on with more or less stumbling in the footsteps of his predecessors. The solution first suggested was apprenticeship; the next, more radical and more efficient, was a library school, corresponding in thoroughness to the schools that fit men to be doctors, lawyers, and ministers. There are now four such schools, whose graduates are eagerly absorbed by libraries, to say nothing of the summer schools, which give those who can not afford a full course such a smattering of library knowledge as can be acquired in six weeks. Besides this, a number of large libraries take apprentices, from whom their staff is recruited or the neighboring small libraries are supplied.

As a natural result a change has come about in the appointment of librarians. Formerly it was too often the man who had failed in the pulpit, the court, the schoolroom, or even the shop, who got the votes of compassionate committees. It is an advance that these votes are often given now to men who have succeeded in some such occupation, with the idea that they will therefore succeed in a library. Nor are these appointments always unfortunate; after all, ability is the main thing; yet they leave something to desire, for though it is true that a man may guide himself by the practice of his predecessors, yet the greatest success does not rise from following precedent, but from knowing when rules can be disregarded and when they can not—a knowledge that comes only from a thorough acquaintance with the subject matter. The next step will be for all appointing bodies to require, as many do now, both ability and experience.

Architecture has lagged behind other branches of library practice, partly because the needs of a library have been expanding so fast, partly because libraries have been designed not so much for use by men who had used them and had learned their defects as for show by committees and builders. Bad ventilation is common, bad lighting universal; one hears of libraries without class rooms for the public or working rooms for the staff; they are continually made with no provision for enlargement, though nothing grows more surely than a libra-

ry's stock of books and number of readers. Some have been built too small even for the books that the library had already. Even for show they have not till very lately reached much success. We have not even found a characteristic style of architecture. Every one knows a church, a theater, a railroad station, when he sees it. One seldom knows a library if it is not labeled. The ordinary library building might be taken for a school, a bank, a courthouse, or a municipal building. Yet the way to a style was plain. A library has one need which should give rise to distinctive features. Its reading rooms, its study, and its working rooms must be very light-much lighter than the rooms of a dwelling house. This necessity ought to show in the design. The stack must not only be light, but must be lighted in a peculiar way, which alone would mark the building as a library, by a series of lofty, narrow windows, separated by still narrower columns or sections of wall, a difficult matter to treat without bareness and monotony, yet surely not beyond the capacity of the American architect.

The library building of 1801 was in most cases one room, shelved around the walls. When too many books accumulated for the wall space, they were put into cases projecting from the sides. The evolution of a century has differentiated this single cell into a score of different parts, each with its own function—for work, the packing, accessioning, cataloguing and classifying, binding, printing, mechanics' rooms; for the personnel, the trustees', librarian's, staff's, janitor's rooms; for the public, the cloak and hat, toilet, charging, reading, current periodical reading, and standard reading rooms, and sometimes the dining room; for special kinds of stock, the rooms for bound periodicals, manuscripts, maps, patents, public documents; for special classes of users, the study, class, lecture, art rooms, the photographing room (with a developing closet), the music room (with a piano and deadened walls), the room for the blind, and the children's room. All of these are needed in the largest libraries; many of them are already to be found in them; the children's room is needed everywhere. smaller libraries, of course, one room plays many parts.

In the first years of the library awakening the most attention was paid, as was natural, to details of management—the

length of shelves, the form of the accession book and the binder's schedules, the size of cards and their ruling, to questions of movable or fixed shelves, movable or fixed location, stamping or embossing title pages; in fact, the things which are now taught in the library schools—the a, b, c of the profession. This excited some ridicule, as also was natural. It was called pedantic; people said that too much time was spent in distinguishing tweedledum from tweedledee; that the loss of originality was too high a price to pay for a doubtfully desirable uniformity; that in absorption in mechanical details the things of the spirit would be forgotten. They were right and they were wrong. It was necessary that these questions should be settled before attacking the deeper problems. forge one's weapons before one goes into the fight. It is best to be thoroughly familiar with one's tools before one undertakes complicated work. Both dangers that were feared are real, but against them stand American inventiveness, which will not be made to halt at any one stage of achievement, and the missionary spirit, which can never be content with mechanics, but must be saving souls—in the library way. The leaders had no fears, and they were justified. In the last half of the last quarter of the century, great as was the library progress in every thing else, the progress in ways of reaching the public was even greater. Go into a modern library, and see the steady stream of books flowing into the hands of every class in the city, their time of waiting reduced to a minimum; see hung up near the delivery desk lists of the best new books, made attractive by pictures and instructive by criticism; at the information desk watch the versatile clerk answering a constant succession of questions about the most diverse subjects, telling one where to look, rescuing another from a fruitless search, explaining the reference books, directing to the shelves, guiding the reading; see in convenient nooks the portraits of authors whose birthday is at hand, hung over tables covered by their writings and the works about them, or look at other tables spread with the best that the library has on approaching anniversaries, Christmas, Halloween, the discovery of America, at once showing the resources of the library, and suggesting to frequenters to read for some better object

than entertainment or novelty; go into the children's room, mark their satisfaction as they cluster round the shelves and discuss their favorite books, or sit absorbed, the older ones in magazines, the younger in picture books; see their friend the attendant helping them, or rather showing them how to help themselves, now and then putting in a word about their choice of books, but obtruding nothing; in a class room see a school teacher showing her scholars the books that illustrate their lessons; go into the exhibition room and see the lines of photographs illustrating some great painter, or the architecture and art galleries of some famous city, the dwellings and peasantry of some unknown country, the peaks and glaciers of a great range of mountains; hear in one room a man reading to the blind, in another a musician trying music, in a third see a photographer reproducing manuscript documents; here a clerk is dispatching books borrowed by a distant library for one of its clients, there another is choosing books which are sent once or twice a week to a delivery in an outlying village; an intelligent assistant will go with them and, knowing all the borrowers, will recommend to each the book which will suit him best, gently leading him to better reading—a sort of pastoral care that it is not easy to give in the rush of the crowded central delivery room; note that this goes on ten or twelve hours every day in the year; that it is free to all; that if formerly libraries were for the learned, now it is certainly to the ignorant that the gospel of learning is given; and then say whether the public library is failing in its duty to the community.

From time to time some one is alarmed at the extension of library activity and cries "panem et circenses." But the circenses, which being interpreted is novels, are so inextricably bound up with the educational work of the library, being the inducement to many to come and be taught, and they are as now written so largely educational themselves, that their supply will stand or fall with the libraries. For the panem, the solid work of the library, whose paying for out of the public pocket seems to certain theorists of dangerous tendency, only justified on socialistic grounds, the extremest individualist admits the necessity of combining for the public defense, and it

is abundantly clear that general ignorance menaces an attack not merely on the republic but on civilization. Moreover, it is the Anglo-Saxon way—and we are still largely Anglo-Saxon —to make theories after trying experiments. We are at present thoroughly committed to the experiment of universal education. We are hoping to find that it not only imparts information and sharpens intellects, but counteracts temptations and lessens crime, increases the earning power of the individual and the effective force of the nation. Few things can be made certain in sociology, but if after a time the prophylactic power of education appears probable, the existence of libraries is justified, for there is no doubt that they are educative. They take up the work where the schools are compelled to lay it down for the majority of the community, and they carry it on through life; they are doing this with greater and greater effect as the schools succeed more and more fully in giving to their pupils their best gift—the power of self education.

THE ADULTERATION OF FOOD AND MEDICINE.

BY HAMILTON P. DUFFIELD.

[Hamilton P. Duffield, surgeon of the Iowa soldier's home, has been a close student of charities in both theory and practice, and has taken a specially active part in devising means for making comfortable those who have served in the armies and navies of the United States and who are now dependent upon the bounty of a grateful government for their livelihood. During recent years he has been connected with the Iowa soldier's home, but has found time to write on his favorite subjects.]

The Mosaic code, given thirteen hundred years before the Christian era, has been the precedent and pattern of all sanitary laws made in the interim between that time and this; and as the lime light of the twentieth century civilization falls upon it, it is seen to transcend all others, in restricting acts, that are not for man's physical well being. Moses' claim that these laws were inspired by Jehovah, and that penalty followed their violation, has been verified for hundreds of years, while manmade laws, and abuses without laws have kept step in the march of civilization.

The Jew's care in the slaughter of animals and fowls is proverbial, and the Gentile is fortunate who can be his customer. The Justinian law, enacted through the influence of pious Jews in the sixth century, had sanitary as well as moral

regulations.

The mental and physical health of the people is a necessary element in the success and stability of a nation; and as the mental health is so dependent on the bodily health, we find of late the needs of the physical man making a paramount issue in government legislation. The first pure food law was perhaps enacted in Spain in 1283, and was against adulteration of food and delicacies, the sale of poisons and love potions, infection of the air by putrefying animal matters and so forth. In 1487, and also ten years later, ordinances were promulgated in Germany against the improvement of wine by sugar of lead; in later times beer was in a way supervised, although mainly under control of the guilds. Medical ordinances in cities are spoken of, one in Nuremburg in 1518 regarding the sale of food and adulteration of wine; the latter seems from very ancient times to have been doctored.

The law of compensation observed in nature we also find operative in national crises. The existing law against importing adulterated drugs, passed in 1848, was enacted after an investigation of gross frauds in worthless drugs, which the surgeons claimed were ineffectual to cope with diseases brought on by the Mexican climate, and thus hundreds were sacrificed to foreign greed aided and abetted by guilty importers. The strenuous individual whose fearless statements started the embalmed beef investigation, did as much toward saving the lives and health of his fellow countrymen, by the agitation then begun, as an army of physicians. The publicity given the canners' frauds led to the arousal of a sentiment that will eventually crystallize in a national pure food law, that will enable rigid state laws to be made effective through control of interstate commerce. This resulted primarily from the Spanish-American war, whose cost in life and health will thus be compensated, by the saving of the same to posterity, if it does not benefit all our contemporaries.

Through agitation consequent upon the loss of life from disease of our army in Mexico during the Mexican war, a committee of physicians was appointed to investigate abuses in the drug importation from foreign countries. The difference in dosage of certain drugs was investigated; sometimes fifteen or twenty times as large a dose was given in the western and southern states as in eastern localities. The result brought out the fact that there were pure drugs for eastern physicians, and inferior adulterated and sometimes worthless drugs, sent out for the western and southern states, and to sell by contract to the army. Europe at that time had stringent laws regulating the sale and dispensing of drugs, so the United States was a convenient and profitable dumping ground for these inferior

goods.

The college of pharmacy of New York had for years protested against misnamed and sophisticated chemical preparations as imported, as being detrimental to the custom house, and to the health of the people. The Philadelphia college of pharmacy was founded for the purpose of exposing these frauds. Seven hundred pounds of rhubarb, practically worthless, passed the custom house invoiced at five cents per

Vol. 10-19

pound, while East India costs forty five, and Russian two

dollars and fifty cents per pound.

Dr. J. M. Bailey was made examiner of drugs at the port of New York in 1846, and he testified before the committee. that more than one and a half million dollars' worth of drugs passed through that custom house annually, and more than one half were adulterated or deteriorated. Accepted contracts made by the bureau of medicine and surgery were taken to show evidence of adulteration and fraud, and to demonstrate the need of legislation. Peruvian bark, not powdered, contract price per pound fifty cents, market price seventy cents. Peruvian bark in powder per pound, price twenty five cents, market price seventy five cents. Eleterium, contract price per pound one dollar, market price, three dollars and fifty cents. Rhubarb, pulverized, contract price per pound seventy five cents, market price, one dollar and twenty five cents. A few more were added, and given only as samples of the accepted contracts. The report of the committee led to the enactment of the law without debate.

The following argument is quoted from the report of the committee: "The laws punish the use of the dagger, yet nothing protects the community from violence not less fatal. but better concealed under the popular name of trade. man write another's name, or pass a counterfeit bill, the prison is his doom; if he stop the mail on the highway, and thereby endanger life, he may be executed." To pass a counterfeit bill is a crime, but to pass a counterfeit medicine is not. and correspondence are more valuable than life, because especial laws are passed for their protection. To state the argument is to refute it. Destitution and want may drive a man to seize upon that which is his neighbor's, and we might in pity overlook the crime, or cover it with the mantle of charity; but the cold blooded, deliberate, studied, and fatal deception practiced in articles designed for the relief of suffering and disease, can admit of no palliation—can find no excuse."

The investigation resulting from the Spanish-American war crystallized public sentiment, and pure food laws were enacted in several states, some mildly restrictive, but others, as in Indiana, Washington, Illinois, California, and South Dakota, of real efficiency. Without doubt the universal press agitation met the general demand for it, and was the controlling force that induced the senate in 1899 to appoint a committee to investigate food products, as for fifteen years food bills have been up for passage in the senate.

In April, 1904, in a speech on the bill pending, Mr. Heyburn said: "Although twenty one or twenty two pure food bills have been before the senate, this is the first time any one of these measures has been discussed on the floor of the senate, under any circumstances." (As the senate really passed a bill which originated with the grange and which did not pass the

house, it must have passed without discussion.)

The senate investigation committee was appointed after the adoption of the following resolution: "Whereas it has been for years publicly charged that in the manufacture of articles of food and drink many manufacturers of the United States who transport their goods from one state to another, do most grossly adulterate such products, to the serious detriment of the public health and to the defrauding of purchasers: Therefore, resolved, that the committee on manufactures of the senate is hereby authorized and directed to investigate and ascertain what, if any, manufacturers are adulterating food and drink products, and which, if any, of said products are frauds upon the purchasers."

Several food manufacturers and chemists of national fame testified before this committee in different cities of the United States. The most important evidence was given by Dr. Wiley who for many years has been chief chemist of the agricultural department of the United States. He said that nearly every kind of food in the market had been at some time adulterated, or mis-branded, rendering it either harmful or fraudulent. It was said that Davenport, Iowa, and other localities where maples did not grow, made Vermont maple syrup, made it too of cheap yellow sugar and vegetable extracts, sometimes extract of hickory bark. Dr. Wiley testified that he had had occasion to make a careful examination of almost every variety of food that had ever been upon our markets for sale, also drinks, because you include in foods all the beverages and con-

diments which are used. He found adulterated milk the commonest fraud, and that boric acid and formaldehyde were used in milk as preservatives. In butter mixtures, cotton seed oil and beef fat, and sometimes pork fat, all sold for pure butter; this before the oleomargarine act compelling proper labeling of such packages. Said that more than half the strained honey on the market was adulterated—jars of glucose,

on which floated pieces of honeycomb.

This senate committee said that in their investigation, they felt that many times they had not been able to get at the exact truth; said they owed much to the services of Dr. Wiley, for his marked ability, and unselfish enthusiasm, and if people could see the horrible stuff sold to the poor, who must buy in the cheapest markets, the poisons that go into cheap soda water, the cheap poisonous stuffs sold for fruit jams and jellies, in poor quarters, the thousands of frauds practiced in the sale of foods upon the ignorant, poor, and sick, and upon the children of the country, the committee felt that all honest

people would share Dr. Wiley's enthusiasm.

Notwithstanding the fact that most condensed milk from the large factories of our country is pure and wholesome. made under good sanitary conditions, these factories, to protect themselves from dishonest competition, have to spend much time and money fighting an unwholesome product. The sugar of the country at present is generally pure, but it would be safer to have a law holding the trust to the present standard. In syrups the committee found four grades branded maple syrup, containing from twenty to eighty per cent of glucose. In extracts they found great frauds, and noted that only one manufacturer (which the evidence shows was Dr. Price of Chicago) invited them to go through his factory from top to bottom—this visit and subsequent analysis, showed that he had nothing to conceal. In examining baking powder, it was the avowed purpose to determine whether the fruit acid from the grape, cream of tartar, or the mineral acid from alum. was least harmful. While not broadly stated as the result of the report, the investigation and analysis showed the purity of both the Royal and Price's baking powders, and that they were made by the use of pure cream of tartar and soda; the

committee recommended that the use of alum in baking pow-

ders be prohibited by law.

The committee visited ninety two breweries and bought four hundred samples. They found salicylic acid most often in imported beers, and American beers for export. found candy much adulterated and colored with aniline dves. sometimes with terra alba and glucose constituents. bonated still wine sold for champagne. Peanut and cocoa nut shells in spices, it was found, made the ground spices cheaper than the whole, as the mixture paid for the grinding, and left a handsome profit. The evidence of the government chemist showed almost every sample of cream of tartar, purchased either at the drug or grocery stores, to be fraudulent, only one having a trace of it. This stuff is known by the cebalistic letters C. T. S. which to the initiated means cream of tartar substitute. This substitute is alum, and many housekeepers, to be on the safe side, make their own baking powder, with this fraudulent cream of tartar and common soda. The sale of the dried and imperfect berries of coffee (which do not have the taste of coffee) is prohibited in Germany, so they are screened, and sent to America by the ton, as black jack, and we have this thrice imported coffee in our breakfast beverage, with sufficient chicory to enrich it.

Dr. Wiley found lard was adulterated with vegetable oils, or fats, under the name of refined lard, cotton seed oil being used as an ingredient. Concerning olive oil, he states that hundreds of barrels of cotton seed oil go to France and Italy yearly, for the purpose of being refined, and that it is returned to us as olive oil, containing only a mixture of olive oil. His evidence showed that ground mustard was chiefly flour and turmeric for coloring. Coffee, ground and unground, roasted and unroasted, was found adulterated with various substances. Molasses and flour is moulded and colored, to suit the purpose of mixing with green or roasted berries; sometimes twenty five per cent of artificial berries are found per pound. said that ground coffee was often two thirds chicory. Coffee selling at forty cents per pound and chicory at about eight Said that fillers were manufactured in large quantities, and in colors suitable for mixing with pepper, cinnamon, and

allspice, etc.; these fillers were ground shells of nuts, or colored flour, and a filler for cream of tartar consisted of infusorial earth.

In the making of beer, instead of malt, barley, glucose, rice, and hominy grits were used, generally, because they were cheaper. Some malt was used, but sometimes sixty or seventy per cent of other things were substituted. At glucose factories there is an oil extracted from the germ of the grain, that is cheaper than linseed oil, and is largely used as an adulterant of that oil. Cider, alcohol, and malt vinegars all sold for pure cider vinegar. In the investigation conducted by the aforesaid committee, adulterations were revealed that came under two classes: those simply fradulent, and those fraudulent and deleterious to health. Dr. Wiley, Professor Mitchell, of Wisconsin, and others testified that butter was sold, from which the milk fats had been substracted, and vegetable and animal fats substituted. Some testimony was given as to milk and butter being preserved by freezene (a solution of formaldehyde).

Under the class rated as simply fraudulent, we find oleomargarine, sold as butter, honey, adulterated with glucose, exhausted tea leaves, with willow leaf mixture, strawberry jam, made of glucose and timothy seed, buckwheat flour, made of rye and other cheap cereals, currant jelly, made of apple cores and parings, mustard seventy per cent starch, colored with turmeric. Pennsylvania statistics issued in May, 1900, showed that eighty seven million, eight hundred thousand pounds of olemargarine was sold in a year, in the United It costs seven cents per pound to make, and thirty three states prohibited by law its sale as butter; but it was sold as butter, at butter prices, thus robbing the people of several million dollars. The oleomargarine, not being deleterious, should furnish the poor a good substitute for butter, at the poor man's price. Victor Vaughan, of the University of Michigan, in the Popular Science Monthly, says that the jellies of commerce are made of apples, boiled with a preparation of tartarine, consisting of either dilute hydrochloric or sulphuric acid, then flavored.

John Bennett, dairy and food commissioner of Michigan, calculated that food adulteration reached fifteen per cent of that sold in the United States. Vaughan, to be conservative, places it at ten per cent. As the annual food supply amounts to four billion five hundred million dollars, we pay four hundred and fifty million dollars for fraudulent products. As a result of the enforcement of Michigan's excellent pure food laws, Inspector Bennett says, there has been at least seventy five per cent improvement; and that more than sixteen million dollars is annually saved at an expense of only twenty thousand dollars per year. Vaughan says, "When the flesh of diseased animals and substances which have undergone putrefactive decomposition, can be doctored up, and preserved by the addition of such agents as formaldehyde, it is time to demand restrictive measures."

Many analyses have been made in recent years, and some of the published results are satisfactory, others tend to make us doubt the dealers: as when eleven out of forty five samples of coffee are impure, forty six out of forty nine jams; when out of five hundred and seventy four samples, forty one and a half per cent are adulterated. Judas betrays his Lord at the communion table, even now, when for the unfermented wine, he gives a weak solution of salicylic acid, flavored with grape juice. Flour, butter, and cheese are the products protected by government, and it is only a short time since there were more than eleven states having effective food laws, and a few more had some statutes not well enforced.

Dr. Wiley, in Leslie's Weekly, writing on the action of preservatives, says that: "While as poisons in food, they are not powerful enough to produce death, they act on the organs of the body, gradually reducing their vitality, and finally endangering the health of the subject." Dr. Carl Kleineberger, of Germany, found that even small doses of salicylates gave rise to the urinary phenomena of nephritis, and also desquamative catarrh of the entire urinary tract. A long continued course of treatment for rheumatic trouble with salicylic acid, or salicylate of soda, will convince any observant physician that it impairs digestion, and causes derangement of the kidneys, unless quite an interim is given between periods of dosage, for the stomach and kidneys to resume their normal functions, showing that daily rations of salicylic acid are not desirable.

The use of preservatives has reasonable advocates among physicians and chemists. Victor Vaughan advocates the use of borax, in such quantities as specified by the English commission: as the dusting of the surface of the hams and bacon to be transported long distances with one and one half per cent of the weight of the meat, with borax, or boric acid: as meat thus dusted does not become slimy. Much of this can be obliterated from solid food, by washing and soaking in clear water, and gives the minimum of evil, when contrasted with the danger of putrefaction. Where people are limited to long distance supplies, preservatives are admissible, but in most instances, they are inexcusable, and rest under the ban of suspicion. The New Hampshire state board of health made a crusade against the use of boric acid in tubs of oysters: its liberal use enabled the dealer to keep these bivalves on his counter, in warm weather, without ice. When the dealers informed the wholesalers, that they were not allowed to sell oysters so treated, the practice was abandoned, without any

of them going out of the oyster trade.

Of all the fraudulent adulterations of drugs, the patent medicine ranks first. Edward Bok did more for suffering humanity through his expose of patent medicine frauds, in the Ladies' Home Journal, than physicians can through medical journals, for the people using the nostrums are reached by Bok's journal. By giving the analyses of thirty six medicines. showing their per cent of alcohol, he no doubt shocked many good temperance women, addicted to their use. Harper's Weekly says: "The patent medicine is strongly intrenched in the affections of the newspaper." One paper owns to an income of forty thousand dollars per annum from this source. Many foreign countries control and regulate the sale of these medicines. Germany has passed strict laws, but has not vet entire control of the sale. Sweden controls by regulating the number of druggists, as there are only three hundred and fifty in the country. In Stockholm there is one druggist to fifteen thousand people, so that there is no need for the patent side in the apothecary shop. The law in Ohio fixes the standard for most foods and medicines: the enforcement of the law, by convictions and fines of violators, has given adulterators of the life and health giving forces a needed lesson. From 1897 to 1903, inclusive, nine thousand one hundred and seventeen samples of foods, drugs, and beverages were analyzed, of which five thousand six hundred and three were pure, and three thousand four hundred and seventy four were adulterated.

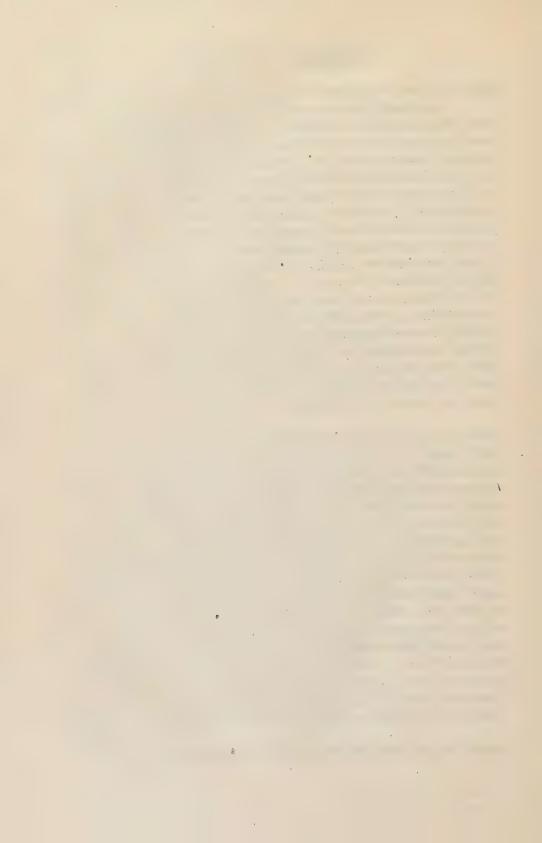
At least seventy five per cent of all the food stuffs imported, come through the port of New York. Enabled by a government appropriation to prosecute the work, the department of agriculture, a few years ago, began a crusade against fraud in imported foods and drugs. They found that about one half of the importations were adulterated, in some form. By some it is claimed that at the present time, it is reduced to about five per cent. Cheap wines, from one section, were labeled as coming from other vintages, whose brand had a higher commercial value. The government can remove these labels, but they can be replaced, after entering into the American trade, unless another strong hand intervenes between middle men and consumer. This is true of most other imports. but it is a great step to have the pure article landed at the seaboard. In January, 1902, Dr. Ernest Lederle was appointed commissioner of health, under Mayor Seth Low. The health department kept pace with others during this reform administration. The total amount of injurious food condemned in 1892 was twelve million two hundred and ninety three thousand seven hundred and sixty one pounds. Nineteen thousand one hundred and eighteen dollars was collected in fines for violations of the sanitary code, as against six thousand two hundred and ninety two dollars, the previous year, and fifty two per cent of the milk was found adulterated. Of three hundred and fifteen samples of one drug, phenacetin, only fifty eight were pure. It was principally adulterated with acetanilid, worth only one fourth as much. As the remedy is often taken without a physician's prescription, no heart depressant should be used as an admixture. In 1904 in New York city, out of eight hundred and seventy one samples of drugs, three hundred and ten were either impure or substitutes; throughout the state, nine hundred and seventy six drug samples were taken, and analysis showed four hundred and fifteen below the standard. Pennsylvania has been active in the enforcement of her pure food law with results comparable to those reached elsewhere.

While the astute Yankee no longer has recourse to wooden nutmeg frauds, his fellow countrymen, in all sections, have found more scientific, fraudulent, and vastly more lucrative occupations. The New Hampshire state board of health has published a bulletin, giving analyses of fifteen brands of diabetes flour, purporting to be made of gluten. The bulletin shows there is no pure gluten flour to be had: and the exorbitant price charged was about the only thing in which it differed from common flour. Most of the vanilla extract now sold is said to be made from coal tar. At the St. Louis fair, in the agricultural building, might have been seen exhibits of the state food and dairy commission of Minnesota, and those of the Massachusetts board of health, showing the use of aniline dyes, as used in foods and beverages. A handsome collection of cloths was exhibited, which had been colored with soda fountain syrups, tomato catsup, and other foods. These poisonous dyes are another reprehensible feature of adulteration.

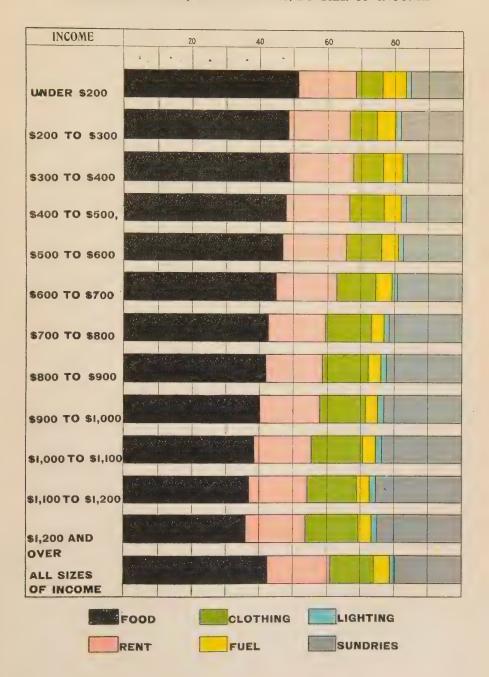
In a milk crusade in Pennsylvania in 1903 only one town. Milton, failed to reveal a violation of the dairy laws. New Jersey report of the chemical department, in 1903, showed forty and eight tenths per cent of food adulteration, seventy per cent of drugs, twenty nine and one tenth per cent miscellaneous. The agricultural station of New Haven published its report for 1902, from which is gleaned the following: Of ninety four samples of catsup, eighty four per cent were colored with coal tar dyes, and had chemical preservatives. Only one fourth of the vanilla was pure, one eighth of the lemon extract, nineteen per cent of jellies and jams. In 1903 in Massachusetts, from an analysis of over six thousand samples of milk, twenty eight per cent were adulterated; other food articles had eighteen per cent of impurities. In 1902 a pure food crusade was inaugurated, by swearing out warrants against the Kansas city beef company, and others, the result of an analysis of canned meats, showing sulphurous acid and boric acid.

About eighty per cent of all the whisky sold in the United





PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES, BY SIZE OF INCOME



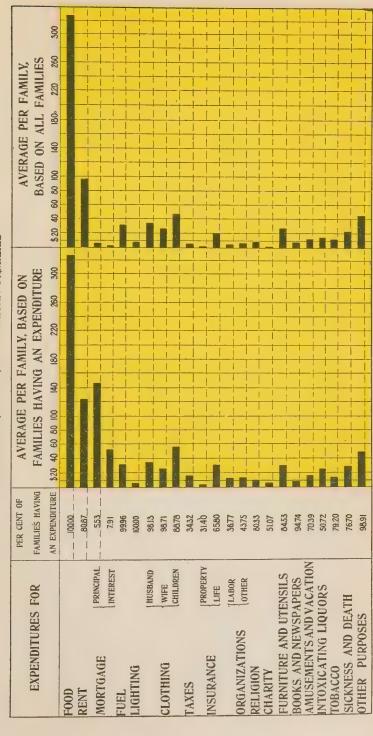






AVERAGE EXPENDITURE PER FAMILY FOR VARIOUS PURPOSES

FROM REPORTS OF 2,567 AMERICAN FAMILIES





States is compounded, and while the chemist may not detect the difference in it and that ripened in the natural way, the stomach is a sure detective, and does not tolerate the fraud without protest. Fifteen year old whisky can be made in eighty minutes, by this way of compounding. Brandy is made in the same way, and many wines are innocent of grape The law should compel proper labeling of all liquors. Many manufacturers are putting on the market, goods of prime quality, while others sacrifice every thing for greed of gain. One of the most dangerous adulterants is wood alcohol. and unless you know the manufacturer, a test would be a safe precaution: as it enters largely into all liquid medicines containing alcohol made by dishonest firms; such as essence of ginger, lemon, peppermint, witchhazel, and bay rum. At the instance of the American Medical society, W. A. Buller and Casy Wood, of New York, made a study of wood alcohol, and report a hundred and fifty three cases of blindness, and a hundred and twenty two deaths, from wood alcohol and remedies prepared from it.

Although the United States Pharmacopea is the standard of the country, it is not a compulsory document, except it is made so by state enactment, hence we sometimes find a difference of seventy or eighty per cent in the product of a drug as made by different manufacturers. Tinctures, fluid extracts, and so forth should be identical, within reasonable limits. Chemicals are often adulterated or impure, and chemical reagents marked C. P. in many cases can not be relied on. Tinctures have been found practically inert. A few years ago, a joint committee from the American Medical society and the American Pharmaceutical association, was appointed, to form some plan whereby pure and reliable drugs and chemicals could be produced, of definite strength and uniform action, to be used as remedial agents. In their report, they deplored the condition, but no practical plan was given as a remedy. Through greater facilities for purchase of the crude drug, a better understanding of what is necessary in its care and manipulation, one firm will produce a better and more reliable product of a certain kind of drug, than other firms. firm may fail to make the best brand of another drug. So it

happens that physicians indicate their preference, by placing the initials of the manufacturer on their prescriptions. If another make of poorer quality is used in compounding the medicine, the druggist is guilty of adulteration by substitution. As the pure food and drug bill was killed in the senate, March 3, 1905, by substitution of another bill, the same fraud in filling prescriptions will for a time continue.

CORRUPTION IN PUBLIC LIFE.

BY CHARLES J. BONAPARTE.

[Charles Jerome Bonaparte, secretary of the navy; born Baltimore, Md., June 9, 1851; received his early education at a boarding school, and later prepared himself under private tutors for Harvard university, which he entered as a junior, and from which he graduated in 1871; in September, 1874, was admitted to the practice of law in Maryland, in the Circuit court of Howard county; was appointed by President Roosevelt to investigate the Federal post office frauds, and in 1905 secretary of the navy; was also a member of the Board of Indian commissioners.]

Many years ago a story was told of a well known professional politician in this city, now dead, who, on his return from church one Sunday, was met by a newspaper reporter, who remarked to him, in substance: "Mr. A., I do not understand how so regular an attendant at church as you are can be also so great an adept in stuffing ballot boxes, fixing juries and witnesses, and plugging corporations."

"Mr. B.," replied the statesman, "I never mix up politics

and religion."

Of late years the American people has shown a disposition sufficiently plain to be widely remarked to act upon a different principle. So many of our citizens are beginning to mix up a good deal of what my late fellow townsman would call religion with what he would call politics, and the resultant of this mixture is so unpalatable and unwholesome to those of his ways of thinking and acting, that a few words as to the real nature, causes and consequences of the phenomenon may be timely and not without interest.

In truth, the mixing up of politics with religion to which my deceased friend referred constitutes one feature of every notable popular movement in progress for some thirty years throughout our country. After the Civil war and the period of reconstruction, the American people found time to take stock. We were reminded by our tax bills that we had a government, a fact our busy, prosperous fathers could more than half forget during the two generations space of steady internal colonization; and, with this reminder, came a growing measure of doubt and anxiety as to the practical merits, in sober truth and not in fourth-of-July oratory, of all branches,

national, state and municipal, of that government under which we lived. As always happens, it proved easier to recognize evils than to discover remedies; and, in the like accord with all human experience, our search for the latter was hampered by the proffer of all sorts of wonderful nostrums, warranted by their respective advocates to usher in a golden age. But, with that plain, hard common sense, that distaste for sound and froth, that craving for facts and distrust of ideas and theories, which have ever been the portion of English speaking folk, the people of our union have finally gained a fairly clear insight into the nature of our ills, and are gradually but stead-

ily learning what medicine will heal them.

The underlying evil in the administration of our public affairs is simply dishonesty. Our public offices are too often held by dishonest men, too often gained by dishonest means, too often used for dishonest ends. Of course, I do not mean that all or a majority or even any large number of our officials take public moneys or fraudulently waste public property or in any way cause penitentiaries to yawn for them. Such incidents are, indeed, much more frequent than they should be, but it may be doubted whether the proportion of downright thieves among the people's servants is larger than among those of private masters. The great bulk of Americans in public employ wish and intend to do their duty, but a grave and mischievous, though very common, confusion of ideas as to what is their duty makes the best of them sometimes fail to do it, and permits the worst often to neglect it with impunity.

The error is rooted in a mistaken and immoral theory as to the nature of the position they hold. In law and morals alike, a public office belongs to the people; its duties are fixed by the people's laws; its salaries are paid with the people's money. In the words of the court of last resort in Maryland: "In this country a public office can not be the property of the incumbent, because it belongs to the sovereign people who created the government. In the declaration of organic principles, prefixed to the instrument creating the government of this state, those holding the most important offices are declared to be the trustees of the public. The same designation necessarily applies to all public functionaries. Therefore every

office created either by the constitution, or by the laws authorized by that instrument, is a public trust created for the public benefit."

While, however, few deny flatly and openly the truth of the doctrine thus laid down, it is practically contradicted every day and in all parts of the union; for seventy five years we have permitted our public offices to be treated as mere loot in a political warfare—not as trusts belonging to the people,

but as spoils belonging to the victors.

Moreover, since the pecuniary value of many offices can be largely increased by adopting latitudinarian views as to certain lines of official conduct, an absence of prejudice is soon cultivated against "tips," "sugar," the "plugging" of corporations and other practices with conventional and euphemistic names which cloak such bald terms as extortion and bribery. years ago, during a public hearing before the Maryland state senate as to a corrupt practices act, advocated by the Baltimore reform league, on whose behalf I appeared, it was openly stated by one of the most experienced politicians of the state, without dissent from any one, that certain wealthy corporations habitually contributed liberally to the campaign funds of both the leading parties, in return for an implied, if not an express, pledge that they should dictate legislation affecting them in case of the success of either; and the fact that the bill in question made criminal any contribution for a political purpose by a corporation was universally admitted to have been the principal reason for its defeat.

Civil service reform, in fact, applies a caustic to the very ulcer in our politics in the application of morality and common sense to the choice of public servants. The typical American politician as developed by the spoils system of politics, earns his living by holding, when he can get it, a public office, in return for past or expected party works; to get rid of him and his work, we must thoroughly eradicate from our own minds and those of our fellow citizens the absurd and wicked notion that offices are spoils. This must be our first step if we would purify our politics, and so long a step that it will go far to render needless any further steps in the work of purification.

To understand, indeed, how the spirit of christianity or

any thing else can operate to purify our politics, we must first define what we mean by purity and what we mean by politics. Politics is simply a Greek word, naturalized into English, and meaning originally city affairs. It is true that its significance has widened with time and with changes in human society; the ancient Greek knew no country, as we use the term, except or beyond his city; and his name for its affairs means, for an American of to-day those of his state or nation as well. Nevertheless, every man who interests himself actively in the good government of his city, who tries to secure for it a sufficient police force and fire department, well paved streets, judicious regulations for the public health, public buildings in good repair, public schools in good working and, with all, low taxes and a dwindling debt; who does what he can to enforce the law, punish crime and safeguard the order, good morals and prosperity of the community, so far as these are intrusted to public officers—every such man is engaged in politics and is, in the Greek sense of the word, a politician. It is true that when we speak of a politician we do not usually mean such a man, and when we speak of politics, we do not first think of such work. But if we mean by politics the trade of living on the tax payers and getting rich at their cost, it is useless to consider how this occupation can be purified, for it can not be purified at all; one might as well discuss how to purify policy-playing or the green goods business, bunco-steering or the flim-flam game. tics thus understood can never be pure except as being pure and unadulterated rascality.

Between the good and bad men in politics there is and should be a warfare without truce or quarter; for whoever would now do good in any form to his fellow men finds the degradation of our political life a hindrance in his task. If he would protect the public health, wisely relieve want, train youth, shelter the unfortunate, suppress vice or punish crime, he must deal with the boss and the ring, and, to do his allotted work well, must sooner or later sweep them from his path. He can not, however much he would, let them alone, for they will not, indeed, they can not, let him alone. Could he and those like minded with him attain full success, their power and prosperity were doomed, for they would then have no

victims whereon to prey, no dupes to do their work; by the very law of their being, they are the natural enemies of every one who would lead others to a higher, purer and healthier life. Men like them have made their trade so dangerous, so odious, so noisome, that against it every force in our midst that makes for righteousness must be directed to-morrow, as it should be to-day.

To have a good, popular government we must, first of all, and before all else, have good citizens. Burke's well known words have been often quoted; they have been even quoted more than once by me; but we can not too steadily remember that, as he said, "There never was long a corrupt government of a virtuous people." When we find any self governing community afflicted with misgovernment, we can safely and fairly believe that it does not deserve a better fate. It may indeed wish to be well governed, just as many a drunkard, in his seasons of repentance and headache, wishes he were temperate, just as many a defaulter, as yet undetected, in saner moments wishes he could repay what he has taken, and feel himself once more an honest man. But, as such men do not wish hard enough to keep away, the first, from the bar, the second from the faro table or Wall street, so such a nation, state or city does not wish hard enough for good government to make bad government impossible.

Because we can not expect a perfect government, whether of this country or of any other, unless, and until, the people governed are also perfect, which is not likely to happen, here or elsewhere, in our time, the conclusion is not infrequently drawn that meantime any improvement is hopeless; but this is a grave mistake. No doubt, as there never has been, so there never will be, a perfect government of men by men; but there have been, there are now, much better governments than those we live under in the United States to-day, and I believe that there might be better governments now and here than any which the world has known in this country or any other. The true lesson is that the question of good government in America is essentially a moral and only incidentally a political one; this is indeed true of all governments, but more clearly and emphatically of a popular government than of any other. I

mean by this that what the friends of good government in America (and especially in America of to-day) have to do is much less to devise methods for the efficient and economical administration of public affairs, than to clearly and frequently set forth and constantly and forcibly impress on the attention of their fellow citizens, the true and admitted ends and principles of government and the daily manifest and grievous derelictions of duty on the part of public officers and of the voters.

Our aim is to spare Americans shame at the government of their country; to rescue the noblest work of our polity from its basest hands; to root out national vices which threaten to make us a political Sodom among christian peoples. He who sees such a goal before him can well fight on with calm confidence that any temporary reverse, any individual apostacy, any seeming injustice of public opinion, are but inevitable incidents of so momentous a struggle, but fitting preludes to so glorious a victory.

THE REIGN OF LAW.

BY JOSEPH WINGATE FOLK.

[Joseph Wingate Folk, governor of Missouri; born Brownsville, Tenn., October 28, 1869; after completing public school course in Brownsville, entered Vanderbilt university, where he was graduated from the Law department in 1890; he returned to Brownsville and opened a law office; a year later removed to St. Louis; he entered actively into politics, and first came prominently before the St. Louis public during the street-railroad strike of 1900, when he succeeded in successfully arbitrating the difficulties; was elected circuit attorney of St. Louis in 1900, and in this office worn national fame by prosecuting the "boodlers"; was elected governor of Missouri in 1904.]

The idea of the practice of law which makes it a matter of quibbling and pettifogging is a low and perverted one; the highest honor and integrity must mark the calling which deals with the rights and liberties of the people. The lawyer is the medium through which the law reaches the people and that brings the public and the law into relations with each other. The commission is a sacred one, to be zealously guarded and exercised. Jack Cade in King Henry VI proposed to reform England, and cheerfully advocated as the first step that all the lawyers be killed. Such a state of society would hardly be desirable. Wherever there is liberty, there must be law,

and wherever there is law, there must be lawyers.

Lawyers are necessary to civil liberty, as civil liberty rests upon law. The lawyer owes a duty to the public which is high and sacred. The license to practice carries with it obligations to society far above those of the layman. By reason of his training and his position he is looked to for guidance and advice and wields an influence for good or evil greater than other men. In the early history of our government, lawyers molded and shaped its destinies; they builded the foundation upon which the superstructure of states rests to-day; they bore the burdens of government, and were the pillars of the young republic. It may well be questioned if the lawyers of to-day, particularly in the large cities, as carefully fulfil their civic obligations as their forefathers. There was a time when the opinion of the upper thousand American lawyers would sooner or later become the opinion of the American people. This was so because they exercised their full duty in public

307

affairs, regardless of private interests. The wave of commercialism has affected the legal profession along with other callings; and would it now be safe to permit the upper thousand American lawyers to dictate the policies of state? Some of the most brilliant minds in the profession are in the employ of interests antagonistic to the welfare of the people. Legitimate combinations of capital are perhaps a necessary incident of advanced civilization, and to these I do not refer, but to the pirates of the business seas that prey on the people, under the guise of corporate charters, in defiance of laws. Lawful corporations are beneficial to a community, but associations conceived in corruption and born in bribery are inimical to the public good. Legitimate combinations are entitled to fair treatment the same as individuals—to equal and exact justice, no more, no less-but if a corporation can not operate without bribery or surreptitious violations of law, it were better for the people that it be wiped out of existence. In the early days the lawyer sold his learning alone and retained his individuality; and be it said to the credit of the profession, that is the rule now. But many eminent attorneys of highest attainments dispose of not only their talents, but their freedom of thought and action. Instead of these being the bulwarks of liberty and the enforcers of laws, they are chiefly engaged in devising means and schemes for evading the laws; they are the advisers of the Captain Kidds of commerce in avoiding the consequences of laws intended to suppress them. It is no part of a lawyer's business to advise his client how to commit crime nor to become a partner in iniquity. The lawyer who does so ceases to act as such and becomes a co-conspirator. There is no sanctity in such relation, and it lacks every essential professional element. If this were not the exception rather than the rule, it would account for the fact that lawyers seem to have lost their proud position of old as mentors of the public conscience. Business is a good thing, honors are better still, but patriotism excels them all, and without patriotism one is unworthy to be a member of the legal profession. He is a minister of the law that emanates from city, state, and nation, and can no more practice law in the true spirit without patriotism, than can a

divine teach the doctrines of a Christ for whom he has no devotion.

One can not be a good lawyer without being honest. Law and honesty go together, jests to the contrary notwithstanding. Dishonesty will undo a lawyer quicker than it will any one else. They see so much of it in other men they should learn to abhor There are fewer lawyers in the penitentiary than any other calling, not excepting ministers of the gospel. This should be a proof of their honesty, but some are unkind enough to say it is merely a tribute to their shrewdness. In a former house of delegates in St. Louis, twenty four out of twenty eight members took bribes right and left. None of them were lawyers. Of the four who did not prostitute themselves, three were lawyers. Under the laws of most of the states, only two classes of men are required to be of good moral character-lawyers and saloon keepers. The laws go further and demand that the saloon keeper, in addition, be a law abiding citizen, while nothing is said about the lawyer in this regard. That is taken for granted. If lawyers do not uphold the laws, it can hardly be

expected that others will.

In a monarchy the government is sustained by the power of the crown; in a republic the government rests entirely upon the laws which a majority of the people make for themselves. If all the laws were ignored, anarchy would be the resultthere would be no government at all. When any portion of the laws are not enforced, the government is weakened to that extent. Laws that are not observed add just as much to good government as sores do to the human body. Disregard of one law breeds contempt for all laws, and laws to be effective must be respected. There is entirely too little respect for the majesty of the laws in America. This inevitably leads to corruption, which will, if tolerated, eat into and destroy civic life. If a dramshop is allowed to remain open at a time the law demands it be closed, then the gambling laws cannot be consistently enforced; then other offenses denounced by the law must be tolerated, then comes grafting by officials for overlooking these violations, then legislators imbued by the same spirit sell their votes for bribe money, and a reign of corruption follows. The perpetuity of our government depends upon the

manner in which our laws are carried out. Nearly every state has laws on the statute books to which no attention is paid. and they reap the fruits by having all laws broken. I am not an alarmist when I say, if these conditions be tolerated the republic itself will sooner or later fall, by the props of the law on which it rests being weakened and decayed. Americans are accustomed to regard a republican form of government as a natural condition. That government is mortal and can die, is a thought so entirely foreign to our conditions that it is folly in the minds of some to discuss it. A glance at history does not lend encouragement to this cheerful view. Our republic, though the best, is not the first nor the oldest. We have lasted now one hundred and twenty nine years. Venice had a republican form of government for 1,100 years; Carthage, 700 years; Athens, with various intermissions, 900 years; Florence, 300, and Rome, 500 years. These governments have long ago passed from the stage of the world, and some of them are little remembered. If our government were to last three centuries longer and then die, it would go down into history as one of the most splendid and shortest lived among the wrecks with which the shores of time are strewn. What caused the downfall of these governments by the people? The people madelaws until the laws became so many the people began to disregard their own laws. The laws of Rome were good; indeed. the Justinian code is said to be the most perfect system of laws ever devised by man, yet Rome rotted and fell, even while this code was in operation. The laws were all right, but the hearts of the people were not right, and the laws were not obeyed. When the laws ceased to reign, the government resting upon that foundation of law commenced to topple over.

The reign of law means the rule of the people, for a majority of the people make the laws. They register their will erystallized in the form of statutes. We need a revival of the rule of the people. Four years ago the law against bribery in all of the states was considered as practically a dead letter. Up to that time, for the fifty years preceding, there had been only about thirty four cases of bribery reported in the books in all the United States. When the prosecutions were commenced in St. Louis, the members of the house of delegates

denounced the bribery law as a blue law and as a dead law, because it had not been enforced before. They argued that members of the house of delegates having been taking bribes from time immemorial, they had acquired a right to do so, and it was just as proper for them to sell their votes as for a merchant to sell his wares. Here was a crime worse than any other, for bribery strikes at the foundation of all law, yet the law denouncing it was not enforced. Men gave bribes and thought nothing of it; men took bribes and boasted of the fact; corrupt men feasted and fattened at the public expense; legislative halls became dens of thieves; laws became merchandise on the market, and all this time the public conscience was asleep. When the revelations came and the people saw how they had been plundered, and realized that a government by bribery was a government by the wealth of the few and not by the people, they saw the offense in all its enormity; and from one end of the land to the other there was a civic awakening.

Now everywhere officials are made to account at the bar of public opinion for all official acts, and those who prostitute their trusts and sell the powers that belong not to them but to the people, are being made to answer for their offenses. yet, four years ago the bribery law was denounced as a blue law, by those against whom it was sought to be enforced. Every law is a blue law if a man wants to break it. The nonenforcement of the bribery statute might be explained by the difficulty of securing evidence of its violation, though a prosecuting officer working at it seriously, and willing to incur the enmities such an investigation would bring about, can usually lay bare venality of that kind, if it exists. But there are other laws plainly made to please the moral element, and then not enforced, to please the immoral element. The difference between a wide open town and a closed town is that in the former the laws are not enforced, while in the latter the laws are observed. The gambling laws in many places are permitted to be disregarded and the laws regulating dramshops nullified. It has been claimed these laws could not be enforced in large cities, but they are enforced and faithfully observed in the large cities of Missouri. In fact, Missouri, is the most lawabiding state of the union, and in yielding obedience to law

has set an example for other states to follow.

There is in practically all the states, a statute requiring dramshops to close on Sunday and election days. Yet in some states it is openly and flagrantly violated. When one enforces this law because it is the law, the same cry is made about blue laws and dead laws. It is a law in the interest of good government to stop the enormous amount of crime that comes out of the dramshop on Sunday and election days. Those interested in having the law violated set up the specious plea that it is an interference with personal liberty. It is no more an interference with liberty than the law against gambling or other laws in the nature of police regulations which restrict the rights of one man when they interfere with the rights of another. Absolute liberty to do as one pleases would mean barbarism, for there would be no limit to the conduct of an individual except his whims. The liberty of one would be the unrestricted liberty of every other, and perpetual warfare would result as the wants and desires of men come in conflict. and every man would have equal right to take or hold what his strength or cunning could secure to him. Security can come only from fixed rules, which the people, as they become familiar with them, will habitually respect. Restrictions which seem to the individual to be hardships are but the will of the majority of the people operating through legislative acts. Where rights are defined and regulated by laws to which respect and obedience are given, any particular law is deprived of all seeming hardship. If each man were allowed to say what laws are good and what laws are bad, and to ignore laws he considered bad, there would be no laws at all. The dramshop keeper who violates the dramshop law, calls loudly for the enforcement of the law against the man who breaks the larceny statute by robbing his cash drawer. The trust magnate looks with abhorrence upon the burglar, yet thinks he has aright to break the statute against combinations and monopolies. The burglar detests the law breaking of the trusts and thinks they should observe the law, but considers the law against house breaking as an interference with his personal liberty. So it goes; men observe the laws they like and think they have a right to ignore those they do not like. The only safe rule is that if a law is on the statute books it must be observed. If a law is objectionable it should be repealed, not ignored. We need reform in the administration of the law more than anything else; though perhaps the old Athenian law might be found beneficial, which subjected to fine and imprisonment the person who proposed a law that turned out to be bad or injurious to the public interests. We do not need new laws so much as the enforcement of the laws we have. There has been too much tampering with the laws in an effort to correct wrongs that do not arise from the infirmity of the laws, but rather from the feebleness of their execution. An imperfect law, well administered, is far preferable to a perfect law badly carried out. The law is merely a weapon in the hands of officials, for without officials laws would be as useless as cannon in war without men. Good government depends more upon the men behind the law than on the law itself. No official has the right to violate the oath that he takes to enforce the laws, simply because some people do not want the law enforced. He cannot excuse nonenforcement on the ground that public sentiment is against the law. He does not swear to support public sentiment, he does take an oath to support the law. Public sentiment is a difficult thing to get at. Lawabiding people are quiet, while the lawless are so vociferous as to deceive some as to their number. The only correct way to determine public sentiment is by the expression of the people's will through the law making body. If an official can not obey the mandate of the law, he should resign and give way to some one else who can. What seems public sentiment may be, and often is, the clamor of the lawless who have a selfish interest in violating law. The indifference of good citizens permitted bribery for a long time, but the public conscience was at last aroused to the necessity of stamping it out. This civic indifference has permitted officials to take a solemn oath to carry out the laws on the statute books, and then deliberately to violate that oath. But the time is coming when an active public sentiment will demand that every public official keep his oath inviolate.

There is no greater evil among us than the easy nullifica-

tion of laws by executive officials who have sworn to enforce them. It is not for an executive official to say whether a law is good or bad, but to enforce it as it is. He should not ask, Is it popular? or is it good politics? but is it right? In the end, if he remains steadfast, the right will win. The trouble has been that a privileged class have violated the law with impunity, and escaped its consequences. It is not hard to pursue with all the terrors of the law, the wretch who picks a pocket or steals a loaf of bread; but it is guite another matter when the law is sought to be put against those who have millions behind them, with political influence enough to affect an entire community. When bad men get a bad man in office, they support him in all the evil that he does. Bad citizens are combined; good citizens are divided—that is the chief cause of law breaking. If good citizens would join hands in patriotic endeavor, the lawless could not control anything, for they constitute but a small proportion of the entire population. The effectiveness of law depends entirely upon how it is executed. When the prosecuting officer is attempting to enforce the law against those of power, he may find himself besieged on every side; close political friends may plead; inducements and hopes may be held out for lessened activity; annihilation may be threatened if he proceeds. Pursuing steadily the course that he has mapped out, with the good of the people alone in view, he may find himself hedged in at times by a wall of hostile influences: but now and then looking beyond to that great public that he is serving, a friendly glance or a kindly clasp of an outstretched hand will cheer and encourage him for further effort. He cannot expect the good opinion of these against whom he enforces the law. Their ill will is the best evidence of his sincerity. Every pressure may be brought to bear to swerve him from his conception of honest effort. If once he falters, his usefulness as a public servant is gone. It may be far easier for him to allow some offense to go by unnoticed, but he should rather have the approval of his conscience than the plaudits of those who would profit by his neglect of duty. He should prefer to retire to private life conscious of having done his best, than by failing to do so receive the encomiums of law breakers. If he halts, he will be applauded by those he should prosecute; if he goes ahead, he will encounter calumnies and attacks; but if he perseveres and remains steadfast, though the way may sometimes seem dark and the task hard, he will be sustained by the hearts and the consciences of the people. Corrupt men support a man for office and expect in return the privilege of licensed law breaking. Officials are elected to enforce the law, and have no more right to permit lawlessness to repay personal obligations than they would have to use the public funds to pay a private debt. When all executive officials are ruled by law, no man could be above the law and the law would reign over all. Such a condition would be the highest form of civilization. Civilization rests upon law, and law upon the citizen. No more important lesson can be brought home than that of individual responsibility for the affairs of state and nation. The indifference of electors is the weakness of a republican form of government. To arouse them to action is a question of supreme importance. Those who would destroy the laws are always active, and work while good citizens sleep; but once the latter are aroused, they are invincible. If the people want a reign of law they can get it, but they must fight for it. There is the same conflict between law and lawlessness as between the true and the false, the right and the wrong, the evil and the good. The people will uphold the laws when they understand the necessity of it, for the vast majority of the people will do right when they know right. There never was a time when unselfish teachers of the public were needed more than now. Lawyers more than any other class should be the teachers of the people. They can do much, if they are true to their calling, to remedy the things that dishonor. As they are ministers of the law, it is their duty to keep the fountains of law pure and undefiled. The person who in private life discharges the civic responsibilities resting upon him, may perform as great a public service as he who faithfully does his duty in public office. Indeed, the public official is a reflection of the private citizen, as the public life of a nation is a reflection of its private life. Lawyers are in a position to wield a powerful influence by tongue and pen for the reign of law, so devoutly hoped for and so earnestly prayed for by all good citizens. The highest obligation of their calling is to their country; their duty is to the public above all. They are the sworn upholders of the law, and as they love freedom and defend weakness, adore the right and hate the wrong, so they should revere the law because it is the law, and thus make their influence known and felt.

GENERAL INDEX



GENERAL INDEX

A	Advertising (A. L. Thomas) I 387
	Whisky
Abrasive materials, (J. H. Pratt) VI 431	Agencies introduced I 394
Grindstones VI 431	Agencies' work I 394
Occurrence of VI 430-1	American and European I 388
Scythe stones VI 434	American progress, early I 392
Whetstones VI 432	Corporations I 393
Abstinence (see drunkenness)	Definition of I 387
Academies I 156	Eighteenth century I 391
(see also education, colleges.	England second in I 392
military and naval academies.)	L'Estrange's journal I 391
Academy, military (see military	Foreign investigation of American. I 388
academy)	Free in United States I 393
Academy, naval (see naval academy)	French forwardness in I 389
Accidents (see also factory legis-	Magazine specialties I 396
lation)	Mail orders and I 396
Actors (see theaters)	Media, choice of I 397
Adams, Cyrus C.,	Methods in general I 395
Adams, Edwin, player I 315	Milton as an advertiser I 390
Adams, John II 13	Money spent in
Declaration of Independence II 16	Old, examples of
Origin of independence II 99	Origin and genesis of I 389
Part of in freeing colonies II 11	Philosophy of I 398-9
Adams, John Quincy	Publications in Britain and U. S.
Monroe doctrine II 170	number of I 392
National guard IX 129	Tax on I 390-1
Proposed national observatory . VII 63	Wording important in I 400
Adams, Samuel	Writers well paid I 395
Part of in freeing colonies II 12	Africa
Adler, Felix	American machinery in VII 202
Education 1 268	American trade with IV 5-6;43
Adlum, John	Agassiz, Louis
Catawba wine maker V 270	American glaciers VII 51
Part of in freeing colonies II 11	Agate VI 344
Adulteration of food and medicine (H.	Agate, moss VI 346
P. Duffield) X 288	Agreements, international
Alcoholic beverages X 299 Polying powders X 292	Britain on Lake Erie reef II 225
	China and the powers II 227
Beer X 293-4	Interoceanic canal II 229
Bill of 1904 X 291 Dainy products X 294	Jolo, United States territory II 225
	Mexico for arbitration II 219
Drugs X 290 Fruit preserves X 294	Mexico to pursue savages II 219
Historical X 288	Modus vivendi, nature of II 223
Imported goods X 297	Other than treaties II 216
Lard X 293	Power of commanders to make
Mason investigation X 291	agreements in war II 224
Mason investigation X 296	Power of president II 218
Milk crusade of 1903 X 298	President authorized to make . II 218-9
Milk X 292	Protocol in Spanish war II 225
Oile X 293	Spanish claims commission II 222
Pharmacy's protest X 289	Turkey by protocol in 1830 II 226
2 224	

319

Agriculture			Agriculture—Continued.	
Alkali resisting plants	I	424	Cut flowers, profits in V	33
American, and foreign trade	IV		Dairy products, value of V	7 2
And labor	VIII	248	Dairying, (Henry E. Alvord) V	19
And population	IV	254	Debt of, to science V	5
And western population	III	364	Defects in American system V	
American and world's produc	3-		Department of agriculture	
tion compared	III	2	_	
American farmer of to-day			(James Wilson) V	
(James Wilson)	V	12	Department of, as an influence V	5
American surplus	V	37	Department of, indifference of	
American tea		412	farmers to V	
And the church			Department of, publications of V	5
Area and production, statisti			Depression of values from '90 to	
of		5	'00	
Area and values under irriga-			Earth molten V	
tion		8	Education, influence of V	
Artificial selection		410	Education needed V	
Bacteriology and			Education of a farmer V	
Beef industry, (Garfield, J. F	2) V	174	Electric age of V	
Beet sugar industry, (C. F. S.			Experiment stations V	
Botanical science, benefits of			Experiment stations established . V	41
Boards of trade, influence of			Exports, consumers of Ameri-	
Botany, problems of America			can	39.
(B. T. Galloway)		414	Exports, determination of V	
Burbank, Luther, (Hollis W.			Exports, early III	1
Field) V		106	Exports of 1904 V	389
Bureaus, farmers'		361	Exports, percentages of V 3	391-
California, growth of, in	V	42	Exports, value and quantities	
Cane sugar, (F. G. Freret) .	V	209	of different V	39
Capital, value of fixed		41	Exports, value of V	
Cattle-feeding, scientific		10	Europe, exhaustion of V	2
Census of 1850		36	Farm areas in the west III	36
Census, eleventh		52	Farm acreage in various states V	38
Changes in fifty years		104	Farm animals, number and	
City population, and		24	value of American V	
Civil war, and		379	Farm animals, value of V	29
Civil war, influence of		43	Farm animals, value of V	4
Climate and tree planting		10	Farm area, increase in from	
Clogs in		47	1850	5
Colleges of		59	Farm lands, causes of decrease	
Colleges, congress, and		405	of	39
Commercial floriculture, (Ler			Farm lands, center of V	49
Thomas)		363	Farm lands, increase of since	
Cord wood, age of			1850 V	99
Cotton, future demand for,(J			Farm property, value of V	4(
Watkins)		135	Farm values from 1850 V	
Cotton lands, expansion of		45	Farms, acreage of, in 1900 V	99
Cotton machinery, (D. C.		1	Farms, average size of V	37
Roper)	v	129	Farms, increase in number of V	28
Cotton seed industry, (C. M.		1	Farms, size of V	28
Daugherty)	V	115	Farms, sizes of, by geographical	
Cotton seed, appreciation of		35	divisions V	39
Crop lands, area of		5	Farms, statistics of American V	
Crop statistics, total		5	Farms, value of V	
Crops on record, first Americ		21	Farmer, growing riches of V	12
Crop values		480	Farmers, character of American . V	5
Crops, relative value of		12	Farmers, intellectual improve-	0.0
Crops in pictures, statistics of		101	ment of V	62
Crops, total value of		14	Farmers' institutes V	
Crops, total value of America		8	Farming in 20th century, (E. P.	0.50
Crops, variety of American .		4	Powell) V	431
-				

Agriculture—Continued.	Agriculture—Continued.
Farming, intensive, attracting	Influence of irrigation on IV 258
the city man V 334	Influence of slavery on west III 19
Farming, intensive, business	Intellectual trend, evidence of V 64
ability	Iowa in III 365
Farming, intensive, capital for	Irrigation and forests V 409
a small start V 336	Irrigation of west V 343
Farming, intensive, experience	Kitchen garden demand V 337
necessary V 335	Kitchen garden start, capital for V 339
Farming, intensive, glass roofs	Kitchen gardening requisites
important V 334	for V 338
Farming, intensive, inviting	Labor, wages of
fields in	Land values, early V 41
Farming, intensive, need of di-	American agriculture and
versity on farm V 333	free
Federation of rural forces	Largest farm in the world V 324
(K. L. Butterfield) V 354	Lien system, southern V 374
Federation of social forces,	Live stock, early American V 22
(K. L. Butterfield) V 355	Live stock values by geograph-
Fertility variations V 103	ical divisions V 47
Fertilization, improved V 33	Machinery, and V 25
Fertilization, principles of V 10	Machinery and production V 100
Fertilizers and soil redistribu-	Machinery, appreciation due to V 47
tion V 104	Machinery, rise of V 41
Fifty years of American,	Mighty river of wheat, the
(LeGrand Powers) V 36	(Rollin E. Smith) V 147
Flour milling, influence of V 44	Motive power needed V 433
Flower culture, capital for V 340	Negro labor and V 383
Food products of west III 365	Negroes as farmers VIII 391
Foreign competition V 56	Numbers engaged in V 100 Nuts, statistics of V 8
Foreign demand and population . V 54	Organization of farmers V 353
Foreign demand, effects of V 56	Ostrich industry V 43
Forests, U. S. policy on V 429	Packing as a food saver V 33
Fruits, statistics of American V 8	Packing, influence of V 33
Fruits, substitution of domes-	Per capita consumption acreage,
tic for foreign, (W. A. Taylor) . V 236	and surplus V 103
Future homes	Per cent of production and ex-
Future of food supply V 10 Future of social V 438	port V 101
Future problems V 429	Periods of American V 24
Geological antecedents V 22	Prospective failure of U.S V 426
Georgia, banner state V 374	Physician, future, and V 439
Government aid V 27	Plant breeding V 417
Government lands IV 254-5	Plant life, nature of V
Governments work VII 43	Plant life, water and V 423
Grange, work of the V 357	Plant nutrition V 424
Grapes and Raisins, (G. C.	Plant pathology V 427
Husmann) V 252	Plants, artificial selection of V 423
Growth of north central, west-	Plants, chemical life of V 416
ern, and south central U.S V 48	Plants, diseases of V 418
Income, gross from V 49	Plants for various regions V 410 Prices and machinery V 103
Intensive farming, (B. T. Gallo-	
way) V 332	Prices, range of staple
Hand labor period, close of V 46	Production and prices, (G. K.
History, early, in U. S V 51	Holmes)V 99
Horse power in VII 214	Products, statistics of V 30
Increase of from 1850 V 37	Progress from 1840-50 V 33
Improvement of American IV 31	Progress independent of farm-
Indian corn, (C. F. Millspaugh) V 158	ers V 54
Indians in V 18	Pure science, application of V 420
Influence of gold on growth V 42	Railroads and V 434

Agriculture—Continued.	Agricultural machinery	
Railroads and growth of V 44	American, early \dots ∇	71
Railroads, influence of V 25	Behel, invention of V	91
Refrigerator cars V 45	Binder, Appleby's V	93
Rice, (D. C. Roper) V 287	Gordon V	92
Rice, improving V 411	Heath's V	90 92
Rise of quick transportation V 42	Locke, Sylvanus V	92
Roads, 20th century V 436	McPhitridge V	90
Seeds V 299	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	91
Seeds, handling of V 299	Nesen and Yost's V	90
Social agencies V 355	OsbornV	91
	Spaulding'sV	92
Doordans the second	Cradles, first American V	71
Doctorion, Brown or restrict	Cutter, Danford's V	96
polis, harare or illitation in the	Haines' V	98
potenti, criming in the contract of the contra	Hazard Knowles' V	96
Double (Let Let)	Hussey's V	81
Southern, and education V 385	McCormick's V	82
Southern and New England	Wheeler'sV	96
farmers, early V 20	Cutters, grass first V	94
Southern, condition of V 373	Deering, Wm., work of V	91
Southern, improvement in V 381	Dropper, Newcomb's V	87
Southern, needs of V 385	Evolution of reaping machines,	00
Southern farmer, credit of V 387	(Merritt F. Miller)V 67,	78
Southern, statistics of V 379	French and Hawkins inventions . V Harvester, Haines' V	94
(Speed, John Gilmer)V 106	Harvester and thresher, com-	03
Starch, (H. W. Wiley) V 166	bined V	94
Statistics of agricultural colleges. V 60	Harvester, inventing the V	89
Steam and V 431	History, early V	67
Sugar cane, (F. G. Freret) V 209	Hoffhein type V	89
Surplus, national farm V 389	Hussey-McCormick contention V	81
Surplus, percentage of V 391 Tea culture in U. S	Hussey and McCormick inven-	
Tea gardens, American (G. R.	tions of	76
Clarke)	Hussey and McCormick, im-	
Tobacco, (J. H. Garber)V 277	provements on V	84
Tobacco, improving	McCormick's, L. J., enterprises of . V	92
Trend of modern, in U. S.	Miller, M. F., evolution of reap-	67
(G. W. Hill) V 51	ing machines V Mower, Aultman and Miller's V	98
Tropical agriculture and U. S V 422	Hussey's V	98
U. S. an agricultural countryV 4	Ketchum's V	9!
U. S. an agricultural country IV 254	Kirby's V	98
United States, its soils and	Mowers, earlyV	90
their products, (H. W. Wiley)V 1	Patents, Manny's V	8'
Values by geographical divisions	Marsh and Johnson V	89
1850-70V 52	Miller, Lindsay, and McClintock	
Value of product per acreV 102	Young V	8
Values, acreage	Osborne and Kirby V	8
Variety of American	Osgood, R. T V	8
Weather bureau's workV 390	Purviance's V	8
West, the, reclamation of, (F. H.	Whitely V	8
Newell)V 343		10 10
Western agriculture and railroads.IV 210	Production	10
Wheat average per acreV 333	Reaper, Ambler, Enoch V	8
Wine, American, (J. H. Garber) V 267	Bell's V	7
(See also dairying)	Boyce, JosephV	7
(See also flowers)	Ogle'sV	7
(See also various cereals, fruits,	Mann's of 1820, V	7
and other products)	Randall, Abraham V	

Agricultural machinery—Continued.	American Academy Political and
Smith's	Social ScienceVII 102
And mower, combined V 88	American Academy Political and
Patent, first V 78	Social Science, AnnalsVII 103
Practical, America birth-	American good citizenship, (Grover
place of V 78	Cleveland)II 1
Reapers, earlier American V 78	American citizenship, creed ofII 7
Reaping machines, first V 73	American idea, triumph of, (A. H.
Lofft, Capel V 73	Ford)VII 198
Pitt, William V 73	American Federation of labor
Pliny V 72	Constitution VIII 146
Removers, automatic V 85	Growth of, (S. Gompers)VIII 143
Schnelby, Wheeler, and Reed,	Membership VIII 140
devices of V 86	Origin ofVIII 143
Sickle, the early V 72	American system of Supreme Courts.
(See also cotton machinery)	(Simeon E. Baldwin)II 76
Aguinaldo	Ames, of Massachusetts, debate of, on
Sympathizers with cause of warII 206	representation
Aiken, W. M	AmethystVI 342
Government architecture 279	Production ofVI 348
Air brakes	(See also corundum)
American plant at St. Peters-	Amphitrite, monitorIX 293
burgVII 206	Anderson, Cyrus M
Air, compressed (see compressed air)	U. S. patent lawsVII 376
Air, liquidVII 12	Anderson, Mary
Alabama battleshipIX 301	AnesthesiaVII 427-8
Alabama claims	Ether forVII 414
Terms of settlement ofII 165	Anglo-Saxons
Alaska	As pioneersVIII 248
Anglo-American treaty on bound-	Nonassimilating
ary ofII 151	Annapolis (see naval academy)
In Behring Sea Fishery disputeII 92	Annapolis (cruiser)IX 30
Influence of Klondike on ship-	Anthropology
buildingIV 129	AmericanVII 19
Albemarle, the	Apples
Incident ofIX 261	First American
Alcohol	First exported fruitV 24
Adulteration andX 299	Appleby, John P
(See also drunkenness)	Binder ofV 98
Alcott, Amos B., author	Billider of
Alger George W	Arbitration (industrial)*
Factory legislationVIII 46	Coal strike of 1902, andIII 32
Aliens (see labor, trades unions,	Coal strike of 1902, and VIII 10
Chinese)	Compulsory, (J. P. Archibald). VIII 113
Alkalies	Compulsory, (Seth Low)VIII 11
Plants which resist 424	Compulsory, and socialismVIII 119
Alliances, foreign	Compulsory, limits strikesVIII 12:
PossibleII 141	Compulsory, not neededVIII 119
With Great BritainIl 142	Compulsory, hot neededVIII 16
Almanac, nautical (see astronomy)	Compulsory, about opposed to VIII 18.
Almonds	Archibald)VIII 11
ProductionV 249	Compulsory, suggestions forVIII 12
The almond belt 250	Definition ofVIII 11
Allis-Chalmers plantVII 282-3	Disappearance of individualsVIII 11
Alsop, Thomas	Effects ofVIII 9
Sewing machine of	Foundry strikes, ofVIII 9
Alvord Henry E	In New ZealandVIII 37-12
Dairying V 194	Limits of compulsoryIII 32
Alamo, the fall of, (see also war,	Limitation, (S. Gompers)VIII 10
Mexican)	Practical uses ofVIII 94-
Ambler, Enoch	T7TTT 10
reaper of	LIGRICOS OF DOMOGRAPHICA IN THE

Strikes, insignificance of strikes.VIII 120	Argentina	
Tiege of the strikeVIII 100	Opposition to reciprocity withII	386
Violated by employers, VIII 107	Arkansas	
(See also industrial commission)	Territory formedII	272
Arbitration, (international)	Armenian massacres	
Agreement for with MexicoII 219 Alaskan boundary, 1828II 211	American duty inII	139
Alaska boundary treatyII 151	Armor plate	
Altruistic nationII 149	(C. O'Neil)IX	326
American diplomacy, andII 173	Armored ships, list ofIX	338
American proposal forII 199	Armored U. S. ships, firstIX	
Behring Sea, on, in 1892II 211	Atlanta, the structure ofIX	
British treaty of 1897II 150	Comparative tests ofIX	332
Desirability of	CompoundIX	332
Hague convention, terms of II 220	Dunderberg, the, structure ofIX	
Hague monument toII 150	Harvey plate in EuropeIX	
InternationalII 148	History, earlyIX	
Lawyers' part in Venezuela	Harvey plate improvedIX	
settlementII 105	Harvey plates testedIX	333
Mexico, with, in 1883 II 211	Harvey's processIX	
Power of president inII 208	Imports ofIX	
Spain, with, in 1871II 210	Ironsides, the new structure	
Archibald, Jas. P	ofIX	329
Compulsory arbitrationVIII 118	Krupp processIX	337
Objections to compulsory edu-	Merrimac, the, structure ofIX	
cationVIII 118	Tennessee, structure ofIX	330
Architecture (college)	Armor (see also navy, the)	
	Armour, Philip D	
Cause of activity in		86
Commercialism and	Armstrong, Henry E	
Endowments and	American educationI	128
European	Army, the U.S. and its commanders.	
Government expendituresI 272	(Nelson A. Miles)IX	1
Growth of	Advancement inIX	100
Growth of necessary I 275	American, (Lord Wolseley)IX	
Harvard 1 273	American and foreign com-	
In U. S., (A. D. F. Hamlin) I 271	paredIX	165
Leland Stanford, Jr 1 274	American best in worldIX	
Military academy I 272	Amusements of old soldiersIX	
National progress and	As social factor, (M. B. Stewart)IX	
Naval academy 1 272	Chief of staffIX	11:
Plans of, general I 273	Civil war, achievements of inIX	5
Styles in various colleges 1 276	Civil war, at end ofIX	
Trinity C., Hartford, I 274	Civil war, in, (C. A. Partridge)IX	5
University of N. Y I 274	Compulsory serviceIX	158
Variety of 1 276	Commerce andIV	51
(See also buildings, high)	Continental army, the IX	10
Architecture (government).	Crime inIX	103
(W. M. Aiken) 1 279	Crudeness of American fightersIX	143
Appropriation for	Danger of standingIX	119
Buffalo post-office I 283	Democracy and esprit de corpsIX	100
Bureau, origin of 1 280	History of, earlyIX	1
Control of I 279	Emergency relief X	
Environmental influences	Eminence of AmericanIX	
Growth and work of 1 280	EnlistmentIX	
Material, how determinedI 283	Eminence of, (J. C. Tutt)IX	
Mints 1 283	General staff ofIX	
Pioneers, determined byI 282	General staff of, (Elihu Root)IX	
Style of I 281	Home for soldiers at DaytonIX	41
University 1 191	Home for soldiers at Hampton,	
(See also buildings, high)	VaIX	42

Army—Continued.	Arnold, Bion J
Home for soldiers at Mil-	Predictions on electric railwaysIV 447
waukeeIX 427	Arnold, Oswald J
Home for soldiers at Marion,	Insurance in practiceIII 452
IndIX 427 Home for soldiers at Danville, Ill. IX 428	Art, American
Home for soldiers at Santa	(F. E. Elwell) 331
MonicaIX 427	And the South
Home for soldiers, expenses ofIX 413	And wealth 343
Home for soldiers, early his-	Backwardness of
toryIX 412 In peaceIX 125	Collections I 335
In the, Revolution (J. S. V.	Critics needed
Paddock) IX 13	Daily press hurt to
Irresponsibility of the soldierlX 154	Development of artist
Lessons of the Spanish warIX 90	French influence
Life of the soldier	Future of
Commanders of, list of formerIX 1	Highest reach of
Methods old and new of training.	Houdon's influence
officersIX 142	Genius, latent I 345 Monuments I 335
Military policy of U. S., (Emory	Museums of
Upton)IX 116	Puritan influence
Nationalizing the militiaIX 94	Articles of Confederation
Occupation of old soldiersIX 424 Officers, lack of	AsbestosVI 323
Caroning and Caroning Control of the Caroning Control	Ashley, W. J.
Officers, noncommissionedIX 104	Early American commerceIV 65
Operation of, under new lawIX 111 Pensions, (W. H. Glasson)IX 429	Asia
Philippine marches, difficulties	American trade with
ofIX 75	And the isthmian canalIV 185
Philippines, in, (L. E. Wright)IX 74	United States and Asiatic
Plans for future ofIX 97	powersII 138
Politics inIX 93, 101	Asphaltum.
Present needs ofIX 91	(J. Struthers)
President's powerIX 111	ArkansasVI 400
Profession, as aIX 153	Bituminous rockVI 397
Regular and militiaIX 117	By-productsVI 397
Filipinos to, relations ofIX 77	CaliforniaVI 401
Reorganization of 1903IX 110	Chemistry ofVI 396
Reorganization law of 1903IX 109	Constituents ofVI 397
Reorganization, need ofIX 96	Deposit of, largestVI 399
Reserves, need of regular	Deposits, U. SVI 402
Resources of U. SIX 126	Geology ofVI 398
Ricarto, mutiny ofIX 77-8	Indian territoryVI 401
Salaries of soldiersIX 161	LiquidVI 398 Occurrence ofVI 398
Schools for officersIX 144	Mining ofVI 399
ShambattlesIX 146 Science army officers inVII 57	Pavements ofVI 404
Dolonco, willing officers market to the contract of the contra	Properties ofVI 396
Soldiers' home, national, (E. O. Stevens)IX 411	Refining of
Spanish war, at the beginning of IX 86	RoofingVI 405
Spanish war, before theIX 65	Uses of
Spanish war, in, (J. E. Stuart)IX 64	Varnish and cementVI 405
Spanish war, since theIX 86	Associations, building and loan
Swords, historic (R. I. Geare) IX 392	(H. F. DeBower)
Training of officers, (Eben Swift) . IX 141	Banking institutions
Transportation ofIX 101	Finances of
Volunteers, need ofIX 93	
"War rides" for trainingIX 149	Members, typical
Weakness, cause of AmericanIX 124	Membership and value statisticsX 228
Workmen in	Methods of
(See also guard, national)	Results of
(Guns, pensions, war, West Point.)	Weaknesses of

Astronomy	Australia—Continued.
Achievements ofVII 68	Foreign trade ofII 256
American, (E. S. Holden)VII 56	Government ownership inIV 365
American nautical almanacVII 77	Austria
And ChicagoVII 78	Early trusts in
And Smithsonian institutionVII 62	Trusts in
(Bowditch, Nathaniel)VII 60	Automobiles, American
Early AmericanVII 70	(John Farson)IV 500
Early coast surveysVII 73	Cheapness of auto truckIV 502
Early naval observatoryVII 72	Chief plants in westIV 501
Foundations of observatories in	Demand for passengerIV 502
U. SVII 65	New York importsIV 501
0. 0	Number in New YorkIV 500
action of the state of the stat	Operating cost of auto trucks
	and horse trucksIV 503
Transfer those transfer transf	Circ of industry
Zion zintoriour obseriante	Size of industry
A TOTAL CONTROL OF THE TOTAL CONTROL OT THE TOTAL CONTROL OF THE TOTAL CONTROL OF THE TOTAL CONTROL OT THE TOTAL CONTROL OF THE TOTAL C	Statistics of
Original work of AmericanVII 92	Used as draysIV 502
Progress of in U. SVII 72	Automobiles
Research, American	Rapid growth ofIV 504
Some aspects of American, (Si-	
mon Newcomb)VII 67	
Work at Harvard and Lick	В
observatoriesVII 76	D
Work of BondVII 64	Bachelder, John
ChandlerVII 78	Inventions, ofVII 344
Clarks, theVII 5	Back, Harry E
GillisVII 64	Manual training in public
LangleyVII 4-5	schoolsVIII 418
LowellVII 5	Bacteriology
Naval officersVII 59	Agriculture andV 430
MitchellVII 74	AmericanVII 18
Mitchell, MariaVII 62	Government's work inVII 4
Chandler, Newcomb and	Pasteur, work ofVII 3
YoungVII 5	Bainbridge, William
Peirce	Naval officerIX 258
Asylums (see blind, the)	Baker, Ray Stannard
(See also charities)	Commerce of great lakesIV 14:
(See also drunkenness and in-	P. C. Hewitt's workVII 183
sanity)	
Atchison, Topeka & Santa Fe rail-	Baking powder
road, (see Santa Fe)	AdulteratedX 29
Atlanta, ironclad,	Baldwin, Mark
Structure ofIX 330	SociologistVII 9
Atlantic ocean	Baldwin, Matthias W
Trade of	Locomotive builder
Aultman, Cornelius	Baldwin, Simeon E
Mower of	President, agreements made by II 21
	President, power of in Hague
Austin, Moses	conventionII 22
Early settler of TexasII 278	Supreme courts, American sys-
Austin, O. P.	tem of
Coal supplyVI 186	United States as a world powerII 19
Coal, world's need ofVI 186	Baldwin Locomotive worksVIII 28
Expansion of American com-	Balloons
merceIV 38	In warIX 39
Territorial expansionII 265	Baltimore, U. S. cruiserIX 29
Australia	Banks
American trade with	Capitalization ofIII 41
British and American trade	Causes of failuresIII 44
with 9	Clearing housesIII 41
Democratic 4	ClearingsIII 47

Banks—Continued.	Battleships
Concentration of banking, (C. J.	Battery power and sizeIX 312
Bullock)III 411	Classes of
Consolidation, benefits ofIII 421	Concentration of man for
Consolidation of, in other coun-	Concentration of gun fireIX 314
triesIII 423	Cost ofIX 311
Corporations andIII 414	Displacement of
Early American efforts	Gun-powerIX 313
Foreign capital in U.S	Modern tacticsIX 318
Future concentration ofIII 424	Gun-building, principles of IX 313
Government control of, (W. B.	Recent advance in, (J. D. J.
Ridgely)III 441	Kelley)IX 308
Hamilton's dislike forIII 403	Size of increasedIX 311
Insurance andIII 453	Weight ofIX 311
Insurance companies' control of III 419	Weights of gunsIX 313
Merging ofIII 416	Bauxites
Morgan, J. P., controlled byIII 419	(J. Struthers)VI 266
NationalIII 443	Deposits of in EuropeVI 267-8
National bank act, firstIII 443	Distribution of in U. SVI 266
National bureauIII 445	History of in U. SVI 266
National, growth ofIII 447	Mining ofVI 267
National Park, affiliations ofIII 420	Occurrence of
North American, charteredIII 35	Properties ofVI 268
Number of, in U. SIII 411	Varieties ofVI 267
Relation of, intricateIII 417	Beach, A. Ely
Speculation andIII 425	Typewriter patents ofVII 366
Standard oil andIII 418	Beans, castor
State control and	Area and productionv
Statistics ofIII 446	Beans, navy
Trust companiesIII 434	Crops, first American
Trust companies andIII 448	Beardsley, Charles
United States, charteredIII 35	Tariff and the trustsIII 361
Volume of business ofIII 415	Beaumont, Dr
Wall street speculation, andIII 379	Researches on stomachVII 419
(See also trust companies)	Bebel, August
Banking	WomanI 406
Deposits in U. S	Beef
Bar, Ben de, player	Beef industry, (J. R. Garfield)V 174
Barbour, II. E	Cattle, raisingV 178
TypewritersVII 365	ExportsV 3
Bard, John, physicianVII 407	Live stock, marketingV 174
Barings, the	(See also packing)
And Stephen GirardIII 408	Beer
Barley	AdulteratedX 293-4
Area and productionV 5	Beets, sugar
Crops, relative value of	Area and productionV
Barnard, Charles	(See also sugar)
Social and economic effects of	Behel, Jacob
railroadsIV 244	Patents of
Barrett, Lawrence 315	Behring Sea
Bartol, B. H	Supreme court in dispute con-
Designer of the New IronsidesIX 329	cerningII 91
BariumVI 322	Belfield, W. T.
Barytes	Researches ofVII 421
(J. H. Pratt)VI 443	Belgium
Growth of industry ofVI 444	Early trusts inII 354
Occurrence of	Bell, Alexander MelvilleVII 171
U. S., in	Bell, Alexander GrahamVII
Batchelor, Charles	Deaf mutes and
Edison's assistantVII 195	Early experimentsVII 177
Battles (see war)	Invention of telephoneVII 173
	LEATONION OF COLOMOTORISM STATE AND

Bell Alexander Graham—Continued.	Boats, submarine
Inventor of telephoneVII 137	Guns inIX 391
Undulatory theory ofVII 174	(See also steamboats)
Bell, John, physicianVII 414	Bobbs, John Stough, surgeon VII 434
Bell, Louis	Boer war
Economy of electric power dis-	Intervention requested
tributionIII 345	Bohn, Lawrence, physicianVII 402
Electric lightingVII 154	Bon Marché, theVIII 311
Bell, Patrick	Bond, William C., astronomerVII 64-74
Reaper of	Bonds, U. S
Bennington, U. S. gunboatIX 296	From 1846 to 1861
Bentley, Edward M., electricianVII 139	Increase from 1883II 406
Benton, Thomas H	Books (see literature)
Reduction of tariff in 1833II 322	Boots and shoes
BerylsVI 329	Horse power inVII 214
Bessemer, Henry	(See also shoes)
Process ofVII 29	Booth, Edwin I 312, 314
(See also iron)	Borax
Biddle, James	(J. Struthers)VI 414
Sword ofIX 394	Chemistry of
Bienville, Jean Baptiste de	Deposits of, in U. S VI 418
Founded New OrleansII 268	In CaliforniaVI 416 Mining ofVI 418
Biglow, Henry J.	Mines, AmericanVI 416
Ether, use of, publication ofVII 416	Occurrence and history ofVI 414
Bigelow, Jacob, physicianVII 412	Occurrence ofVI 417
Binney, Horace	PreservativeX 296
Confederation, AmericanII 58	Production ofVI 418
Biology (see zoology)	Reduction ofVI 419
Bird, Robert M., author I 356	Uses of
Birkinbine, John	Manufacture, various processes
Iron oresVI 61	ofVI 419
Birkinbine, John	Boré, Etienne de
Mechanical engineering in mining VI 446	Sugar invention of
Progress of mining industryVI 446	Boshard, John A
Bitumen	The Sewing machineVII 339
J. StruthersVI 395	Boston
Blackberries	Steam plants inVII 279
Burbank'sVII 106	Boston, (U. S. cruiser)
Blaine James G	Ownership ofIII 333
Monroe DoctrineII 187	Boston & Maine railroad
Work of, for reciprocityII 380	Ownership ofIII 33:
Bland, RichardII 409	Boston library
Blast furnacesVI 87	American art, in
Size of AmericanVI 87	Botany
(See also iron)	Problems of American
Blind, the	World's debt toVII 3
Education of X 96	Boucicault, Dion
Institutions for, (G. L. Smead)X 93	Boughton, D. H
Institutions for, nature ofX 94	National guardIX 12
Mental trainingX 98	Bowditch, Nathaniel
Music and X 102 Physical culture for X 98	And early American astronomy. VII 6
Problem of X 95	Bowditch, William, astronomer VII 7 de Bower, Edward W
Blockades	The American salesmanIV 50
Of Spanish American ports for	Bowman, Alexander H
debtsII 188	Architect, first supervisingI 28
Proposed, of Venezuela, for debtII 189	Boyce, Joseph
(See also diplomacy)	Reaper of V 7

oycotts.	Bridges—Continued.
Compulsion not bargaining III 314	Truss, improvements inIV 408
(See also strikes, industry,	Washington, over the HarlemIV 411
and labor)	Brooklyn (cruiser) IX 299 Brooklyn Polytechnic school VII 302
Soyesen, H. H	Brooks, John Graham
Old American sea fightsIX 263	Trade union labelsVIII 181
Bradford, Wm., author 350	Broom corn, area and productionV 7
Bradstreet, Anne, author	Brophy, Truman W
Brainard, Daniel, surgeonVII 432	American dentistryVII 437
Brandies, American	Brown, Archer
Brazil, cotton growing	Foundations of American iron industryVI 95
Brewer, Supreme Justice David J	Bryant, William Cullen
Bribery (See corruption)	Brush, Charles F., electricianVII 138
Civic duty,II 108	Browne, Chas. F., humorist 365
Brick	Brown, Jacob, soldier 4
Trusts	Buchanan, James
Bricklayers, conditions ofVIII 20	Message of on tariffII 328
Bridges, American, and bridge build-	Buck, D. A. A
ing	Watch, invention ofVII 360
(Henry S. Jacoby)IV 400	Buck, H. W
American, building, (T. C.	Niagara power, utilization ofVII 240
Clarke)	Buckland, W
American, abroad	CIACLE CONTROL
Advantage of one designIV 403	BuckwheatV
Boston-CambridgeIV 414	Cultivation, earlyV 21
BrooklynIV 410	Buffaloes, in 1900V 47
Chicago	Building associations (see associa-
C. & O. railway, great terminal	tions, building and loan)
ofIV 407	Building trades
Compared with EuropeanIV 396	EnglishVIII 21
Concrete and steel archIV 412	II. S., in
Detail of designsIV 405	Unions ofVIII 21
Duluth, unique	Buildings, high
Foreign bridges, notedIV 398	Caissons for
Great, Des Moines valley	Character of city
viaduct, theIV 407	Congestors of streets 1 29
Growth of, causes ofIV 394	Conveniences in
Highway, poorIV 409	Drainage of
Length of spanIV 405	Fire proofing 1 288, 29
Markets for	Floor construction
Memphis	Foundations of
MinneapolisIV 411	Frame of skyscraper I 28
Moving, notableIV 413	Light obscured by 1 29
NiagaraIV 411	New York 1 29
Old, problems of replacingIV 415	127 - 1-21-1-22
PittsburgIV 410	Tenney W. L. B., originated by 28
Plate girderIV 405	People housed in
Railroad loading, uniformIV 401	Piles in foundations
Railroads an impetus toIV 400	Power plants of
Riveted bridgesIV 406	Power used byVII 34
Rockville, great stoneIV 413 St. Louis, world famousIV 410	Rust of steel work of 29
Standard material specified IV 402-3	Safety of 29
Supremacy of, (Thomas Curtis	Shyseraners, modern (A. W.
Clarke)	French) 28
Tests for materialIV 402	Specifications for city 28
Topeka, great steelIV 412	
Truss, heavy AmericanIV 407	Value of sides
Truss span, longestIV 407	Vibration guarded against
Ex ann of the contract of the	

Buildings, high—Continued.	California—Continued.
Walls as curtains 286	Industries ofIII 366
Walls, how madeI 288	Railroads, helped byIV 211
Wind and high 1 287	Raisins, first inV 244
(See also tenements)	Wines of
Bull, Ephraim Wales	University of too University
Grape, culture of	of California)
Bullock, Charles J	CaliforniteVI 333
Concentration of banking in	Callender, G. S.
U.SIII 411	Pioneers of American industryIII 8
Good and bad of trustsIII 121	Campbell, Helen
Bunner, Henry C	Prisoners of povertyVIII 190
Burbank, Luther	Campion, John
Work of (H. W. Field) VII 105	Fire fightersX 222
Burdick, Francis M	Canada
Lawyer's place in American	American trade, with
life	Behring Sea fishery cases
Burgess, John	Conquest of
The state 80	Immigration smuggled throughX 124
Burgess, John W	Loyalty of in revolution IX 18
Political scientistVII 94	War of 1812 andIX 31-2
Burglary	Canal, isthmian American internal tradeIV 185-6
Trust companies and	American policy definedII 235
Burgoyne, John, British soldierIX 19	American policy of 1858II 240
Burke, Edmund	American support ofII 146
Conciliation, speech onII 98	Asia, trade with
Burnett, Frances Hodgson	Attitude of American govern-
Burr, Aaron	mentII 228
Bury, Richard, De	Attitude of U. S. government
Estimate of legal professionII 93	toward, (Ira D. Travis)II 228
Butler, Nicholas Murray	Britain and U. S. irreconcilableII 244
American colleges	Central west, and
Principles of American educationI 78	Chicago Pacific coast tradeIV 189
Business men	Clayton-Bulwer controversyII 237
Educational needs of	Clayton-Bulwer treatyII 235
University training for, (S. N.	Cleveland's open policyII 245
Patten) 1 218	Colombian treatment 1880
Butter	Colombian treaty of 1869
Exports	Congress asserts need ofII 230
Butterfield, Kenyon L	Control, American attempt to
Federation of rural social forcesV 354	securelexclusiveII 241
ExportsV 32	Distances via, table ofIV 183
Exports 52	Dutch companyII 229
C	Economic aspects of, (Emory R.
Cable, George W	Johnson)IV 181
Cables (see telegraphs)	Exclusion, American policy of II 232
Cactus	First American action onII 228
Burbank'sVII 107	Freedom of declared
Caissons	Frelinghuysen-Zavala treaty of
High buildings, for 290	1884
Calico	French company at PanamaII 243
Cotton production	Gadsden treaty, effect ofII 237
Print machine, earlyVII 270	Grant's proposed survey II 240
California.	Guaranty bill of 1891II 246 Hawaiian tradeIV 185
Admitted to UnionII 285	Hayes, President, asserts Ameri-
Ceded to U. S. II 283 Cruiser IX 302	can supremacy of
HistoryII 281	Hay-Pauncefote treatyII 246

anal, isthmian—Continued.	Capital—Continued.
History, diplomaticII 228	Cooperation of labor and, (W. H.
Iron trade andIV 188	Pfahler)VIII 89
Monroe doctrineII 243	Corporations, small for earlyIII 39
Nicaraguan treatyII 240	Dominion of capacanomic and a contraction of the co
Pacific trade andIV 184	Duties of to laborIV 516
Panama, proposed by New	Feudalism of minesVIII 328
GranadaII 232	Foreign, early invitation toIII 32
Pánama road, protection of 1 238	Foreign capital in U.S., earlyIII 31
Policy of 1881II 244	Foreign in U.S. in 1836, esti-
Railroads, AmericanIV 1,92	mate of 33
Reasons forIV 181	Industrial commission onVIII 29
Resolution of 1835	Industry, its part inVIII 90
of 1839 II 231	its share ofIII 93
Rights of Central American	Labor, dispute of withVIII 91
republicsII 239	Organization ofVIII 91
Ship buildingIV 190	Problems ofVIII 139
South American tradeIV 184	Promoters help investment ofIII 232
Southern states andIV 186	Supplies of, early AmericanIII 29
Suez tonnageIV 196	Trusts, overcapitalization ofIII 205
Tehuantepec route, reservation	West, demand for in earlyIII 24
in, AmericanII 238	(See also civic federation, labor,
Tehauntepec ship railroadII 234	trusts, railroads, banks)
treaty with MexicoII 238	Capron, Allyn K., soldier, naval hero IX 396-7
Tolls, rate ofIV 196-7	Captain of industry, and his lieu-
Tonnage and tollsIV 163	tenants, the (W. R. Lawson).III 244
Trade, New York-Pacific coast IV 188	Cars, railway
Trade route, as aIV 182	BrakesIV 392
Treaty of 1846	Capacity of freight
Various bills for	Character of
Wheaton, Henry II 232	History of, early
	Pullman's invention
(See also trade)	Steel freight
Canals	The development of (George
Chicago drainage and American	A. Hutchins)IX 390
	(See also railroads)
machineryVII 204 Coal earlyIII 26	Carey, Henry C
Cour, carry	Increase of tariff in 1842II 324
2-010-P	Carnegie, Andrew
English, profits inIII 32 Financial difficulties in early	(C. M. Schwab)VI 147
	Business purposes ofVI 153
111101100110011111111111111111111111111	Cyclops plant foundedVI 148
Internal American	Edgar Thomson companyVI 148
Controlled b Control (1000)	Employees' share in works of
Rariton, plannedIII 26	Enterprises, scope ofVI 151
Suez, commercial influence ofIV 20	Future industry, forecast ofIII 281
treaty based on American	
principlesII 168	Homestead worksVI 150
Tonnage of Suez	Institute, motive of
Traffic on AmericanIV 239	Iron and steel, uncertainty of III 278-9
(See also Panama)	Lucy stack, increase ofIV 154
Canning, George	Organization of manufacturing
Monroe doctrine, supports U. S.	industriesIII 273
inII 169	Output of worksVI 152
Canning and preserving (see specific	Partners, buying out hisIII 278
heads)	Peace arbitration, gift of toII 106
Canning industry	Philanthropy to employeesIV 153
Poisons andVII 34	Success of, cause ofVI 152
Cannon (see guns)	Success, tells the secret of hisIII 278
Capital	Wages, on investment ofIII 279
Concentration ofIII 49	(See also iron, steel corporation,
Consolidation of, labor andIII 96	United States)

Carnochan, John Murray, surgeonVII 432	Charities—Continued.
Carolina, South	Institutions, benevolent, (John
Cotton, introduction ofIII 20	Koren)
Coulon, militare control of the cont	number and inhabitantsX 22
Carolinas, the	Italy, inX 3
Language of the carry	Jewish, (Lee K. Frankel)X 57
Carroll, John	Methods of organizationX 9
Carter, James C	National conference ofX 14
Army andIX 114	Expansion of, (A. O. Crozier)X 18
Municipal governmentII 433	Funding of institutionsX 27
Cartridges (see guns)	Grand Rapids movementX 20
Castine, gunboatIX 297	Homes, permanent
Castlereagh, Lord	Hospital statistics
Favored Holy AllianceII 169	Hospitals, cost of
CatliniteVI 338	preponderance of
Catholic, Roman (see Roman catho-	Number of aided by statesX 24
lic)	Number of aided in institutionsX 23
Catholic University, the (see Roman	
catholic)	
Railroad and monopolyIV 339	
(See also live stock)	
Cement	
Trust, theIII 164	PoorhousesX 43
Cennabar	
Census, provision for by second	Private and publicX 4
COMBIODS	111vate, primacy 01 20
the trusts in the light of,	Problems of
(W. R. Merriam)III 159	
Central America	State control of
Governments of and, isthmian	dangers ofX 11
canalII 230	
Republics of, rights of, in canal	State regulation of X 3
grantsII 239	
Central Pacific railroad	in BelgiumX 8
Military lineIII 371	in Germany and Britain X 7
Cereals	need of central
Area and production in U. SV 6	Theory and practice ofX 1
Cervera, Admiral, Spanish officerIX 243	
ChalcedoniesVI 344	
Chapman, Nathaniel, physicianVII 413	Charles River Bridge Co. vs. Warren
Charity	Bridge
CubanII 303	Charleston, (U. S. cruiser)IX 292-302
Institutions for the blind, (G. L.	Chase, Salmon P
Smead)	110 11111111111111111111111111111111111
Porto RicoII 301	Decision on indestructibility of
Charities	UnionII 85
(C. R. Henderson)X 1	Indivisibility of Union
Abuses of in cities	Cheese
Blind and deafIX 32	ExportsV 32
Child laborX 16	(See also dairying)
Children's homes	Chelmers, Lionel
Christian, earlyX	American physicianVII 405
Churches andX 47	Chemistry
Cost of institutions by statesX 28	
Cuban	Debt to, world'sVII 31
Dispensaries X 37	
Drink andX 16	
Elberfeld system X 3	(
	Needs of in U. SVII 86
	THE PERSON OF TH

PasteurVII 34	China
Plant life 4	Agreement between and the
Railroads, used byVII 85	powersII 22
U. S. andVII 84	America the friend of
(See also electricity)	American geographical advan-
Chemicals	tagesII 26
Trusts, statistics ofIII 164	American rights to open doorII 13
Chicago	As buyer of American cottonIV 11
Astronomy andVII 78	British and American trade
Buildings, high, originated inI 289	withIV 8-
Crime inII 109	Commercial interest in
Grain speculation, center ofIII 385	Cotton, American supplies of, toIII 10
Immigrants and trades unions	Cotton mills of
inVIII 226	Europe, compared industrially
Isthmian canal Pacific tradeII 189	with 25
Lumber marketIII 361	Exclusion actVIII 20
Packing center, its rise asV 176	Exclusion ofVIII 23
Population, its heterogeneousII 113	Immigration ofVIII 24
Western industry, andIII 368	Industries, growth of its
Chicago (U. S. cruiser)IX 292-3	Laborers, asVIII 25
Chicago & Great Western railroad	Lawyers inII 10
Ownership ofIII 332	Opportunities for American
Chicago, University of, (see Univer-	capitalII 25
sity of Chicago)	Philippine conquest opensII 20
Chickens	Philippines and the open doorII 13
ProductionV 30	Solvency in businessII 25
Child laborVIII 15	Trade with, importance ofIV 20
Abuses ofVIII 82	Trade with, not helped by Phil-
America, andVIII 15	ippine purchaseII 13
Coal mines andVIII 354	Transportation rates and wages
Education and	inIV 21 Trusts inIII 10
Editorion, contract of the con	Wages and railroads inVIII 41
Zattipio j ciby a c d and a	Chisholm vs. Georgia II 6
Exploited by machineryVIII 373 Factory acts, provokedVIII 73	Marshall's opinion
HoursVIII 61	ChlorastroliteVI 33
Ideal lawVIII 65	Choate, Mrs. William G
Illiteracy lawsVIII 60	PhilanthropistX 22
Law, evadingVIII 63	Chromium
Laws, in various statesVIII 57	Steel making, use of inVI 17
Inadequacy ofVIII 62	ChrysopraseVI 34
Legislation, earlyVIII 64	Church, the, (see religion)
Legislation, (Florence Kelley)VIII 56	Churchill, Winston 36
Massachusetts lawsVIII 56	Cider
Night workVIII 62	Experiments, governmentVII 4
South, in theVIII 83	Cigar makers
Children	Conditions of
Aiding poorX 162	Label, union, adoptVIII 18
Charity andX 6	Strikes ofVIII 15
Cost of homes	Cigars (see tobacco)
Criminal statistics of	Cigarettes (see tobacco)
CrippledX 159	Packing center, decline of asV 17
Cruelty toX 165	Cities
Defectives, care of	Appointment of police inII 43
Girls, reform schools forX 166	Civil service reform, need ofII 11
Public nurseries	Congestion ofII 42
Race suicide and	Conscience, tone of popularII 12
State aid for poor	Crime and poverty in, (J. R.
Summer colonies forX 169	Commons)
(See also orphans)	Crime, their legal relation toII 10
(

Cities—Continued.	Clark, AlvanVII 58
Criminal statistics of 131	Work ofVII
Democratic rule a failureII 119	Clark, E. C
Gambling, dangers of inII 118	Naval OfficerIX 298
Garbage laws necessary inII 115	Clark, John Bates
Growth of AmericanII 429	Monopoly and the struggle of the
Growth ofIII 347	classesVIII 12
Hurry of life inII 111	
Influx to, causes ofX 130	Trusts and potential competi-
Law, difficulty of enforcing inII 113	tionIII 139
Laws, results of violating inII 114	Clark, John B
Meccas for cranksII 110	Political economistVII 98
Nation must morally master itsII 119	Clark, Ransom
Need of parks inII 114	Sword ofIX 398
Platting of, wisdom inII 113	Clark, Thomas C
Policing, too much, not good II 120	Cyanide patent ofVI 230
Policeman's lot inII 116	
Political machine inII 430	Clarke, F. WVII 84
Population of city and countryX 128	
Prosperity, centers of	Clarke, Sir George
Saloons ofII 117	Strategic value of West IndiesIX 406
Sites of AmericanIV 29	Clarke, Grace Riley
Slums of, filth inII 113	American tea gardens
Suicide, cause of, inII 113	Tea culture in U. S
Subways, New YorkIV 451	Clarke, Thomas Curtis
· ·	American bridge buildingIV 394
Track elevation in	American supremacy in bridge
	buildingIV 394
Citizenship, American	ClayVI 312
(David J. Brewer)II 108	BallVI 313
(Grover Cleveland)	BrickVI 313
Creed of, Grover Cleveland	FireVI 313
Education and 241	Mining ofVI 314
Typical American	PaperVI 314
Civic duty	PotteryVI 315
(David J. Brewer)II 108	Preparing, for marketVI 315
Inattention toII 116	SlipVI 314
Civic federation	Trust, theIII 164
Arbiter, not anVIII 101	Uses ofVI 315-16
Purpose ofVIII 100	VitrifiedVI 313
Work of, (O. S. Straus)VIII 100	Clay Henry
Civil service	Canal, freedom of interoceanicII 168
Abraham Lincoln, andII 413	TariffII 320
Corruption inII 407	Clayton-Bulwer treatyII 235
Merit system in municipalities,	Controversy overII 237
(C. R. Woodruff)	Clemens, Samuel C
Pensions andII 414	Cleveland, Grover
Political evils ofII 430	American good citizenshipII
President's part inII 412	Capital and laborII
Reform act of 1883 1I 406	Creed of good citizenshipII
Reform, beginning ofII 410	Free trade, opposed to
EnglishII 411	
Need of, in citiesII 119	Good governmentII
Theory ofII 412	Open canal, policy of
Civil war	Overconfidence of patriotismII
Agriculture, influence of onV 43	Political corruptionII
Cause of	Political dutiesII
Civilization	Political partisanshipII
Lawyers an index toII 105	Purpose of American govern-
War factories, andI 60	mentII
Clark, Alonzo	Venezuela boundary disputeII 182
Researches ofVII 420	
	Cleveland Cliffs Iron companyVIII 335

limate	Coke—Continued.
Tree planting, andV 10	Connellsville, output atVI 198
United StatesIV 25-6	Connellsville productionVI 194
(See also races)	History in U. S., earlyVI 195
llossy, Samuel, physicianVII 407	Hoisting machineryVI 199
Sothing	Oliver worksVI 197
	Operating machineryVI 196
New England manufacture of,	(See also coal, iron and steel)
early	Cokely, M
Producer of, U. S. largestIV 35	Machine shop conditionsVIII 357
Coal	Coles, Elizabeth N
(E. W. Parker)VI 182	PhilanthropistX 221
American and British produc-	
tionVI 188	College architecture (see architecture)
Britain loses supremacy inVI 188	College, naval warIX 368
Canal, isthmian, andIV 188	Colleges
Coal fields, AmericanVII 50	(N. M. Butler)
Coke andVI 192	(C. P. Huntington) 1 240
Demand for bituminous and	Academies, modern
anthraciteVI 191	Agricultural, statistics ofV 60
Deposits in different countriesVI 3	AlumniI 167
Development of, in the WestIV 291	American, early I 154
Development of U. S. resourcesVI 183	Backward 156
Electric coal cuttersVI 41	Benefactions for I 168
Electricity in miningVI 38	Cheap, needed I 170
	Course, length of I 158
	Cheap tuition and I 170
Fields of U. SVI 182 Formation of VII 48	Cooperation, need of 188
Z OZIMBOLOM OZITITITITITITITITITITITITITITITITITITIT	Courses, shortened I 162
Handling of at minesVI 34	Distribution, geographical I 171
History in U. S., earlyVI 188	Elective studies I 179
Iron industry andVI 189	Expression of democracy
Mining of in U. S., early VI 4	Finishing schools
Production of anthraciteVI 184	Four years term accidentalI 160
Production of in U. S. from	Future of, plans for
1820VI 183	
Production from 1860, world'sVI 187	High schools, fed by
Quantity transportedVI 190	Income of small
Quantity transported in U. SVI 190	Individualism, need of
RailroadsIV 333	JuniorI 18
Railways andVI 189	Large, hostility to
World's need of, (O. P. Austin)VI 186	Length of course
World's need and U. S. supplyVI 186	Migration I 17
(See also geology, petroleum)	Naval war, (H. Wilson)IX 36
Coal oil (see petroleum)	Number of small, in U. SI 18:
Cobalt	Old and newI 156-
Hardening steelVI 178	Permanency of
	Policy in, not definite 15
Cochran, M. M	Professional schools
Coke industry andVI 194	Reconstruction of 16
Cochran, Mordecai	Religion and 1 17
Discoverer of cokeVI 194	Religious spirit in
Cocoanuts	Replacing high schools 18
Production	Requirements of
Code, penal, (see crime)	Salaries in I 17
Coeducation (see education)	Sameness of 183-
Coiron, John J	Secondary training and
Sugar cane of	Small, advantages of
Coke	Small, distinctively AmericanI 17
By-product of natural gasVI 390	Small, future of (W. R. Harper)I 16
Coking methodsVI 200	Small, special demand forI 16
Connellsville coke region, (F. E.	
	Small, sympathy for I 16
Saward)VI 193	State universities and 17

Colleges—Continued.		Combinations (see trusts, railroads,	040
Survival of fittestI	180	and banksII	248
Teachers, heroism ofI	167	Commerce	
Transition placesI	169	American and the foreignerIV	
Universities, transformed toI		Physical foundations ofIV	
(See also education)		In OrientII	
Colombia, United States of		Trade and, (Victor H. Metcalf)I	
Canal treaty of 1869II	240	Army, the, andIV	517
of 1870II		Beginning of foreign trade,	
Isthmian canal andII		(Worthy P. Sterns)IV	89
Colonies the	200	British capital in coloniesIV	85
Area of, problematicalII	266	British encouragement of co-	
	85	lonialIV	82
British encouragement of manu-	00	British legislation on AmericanIV	67
British encouragement of manu-	82		01
facturesIV		British navy, early American	
Commerce of	66	fostered byIV	69
Commerce of, Adam SmithIV	77	Business, earlyIII	36-7
Committee on grievances against		Business education, (S. N.	
Great BritainII	13	Patten)I	218
Declaration of freedom of, by		Census, andIV	
VirginiaII	11		
Manufactures, embargo on co-		Chicago, east fromIII	
lonial	75	China's ability to payII	
English bottoms, law favoringIV	74	Cloth, early trade inIV	72
Franklin's "Canada Pamphlet"IV	76	Colonial, L. B. LeckyIV	66
Freedom of, debates of Jay,		Colonial commerce, Adam	
Duane, Livingstone, Rutledge II	13	SmithIV	77
Hats, manufacture ofIV	79	Commercial nations, influence	
Iron and steel, manufacture ofIV	81	ofIV	050
Iron, pig, in southernIV	78		
John Adams, part of, in freeingII	11	Conditions, American, in 1812III	16
John Dickinson opponent of	11	Conditions in west, earlyIII 16	
	12	Consulates, work ofIV	519
freedom of		Corporations, and bureau ofIV	520
Laws restraining commerce ofIV	70	CubaII	311
Lawyers, led byII	99	Cuba as gate to Latin tradeIV	63
Literature inI		Department of, duties of theIV	
Manufactures, restriction of, inIV	75	Department of, scope of theIV	
Molasses, embargo onIV	83	Early American, (W. J. Ashley)IV	65
Sam Adams, Roger Sherman,		Early AmericanIV	66
Oliver Wolcott and George		East and west in U. SIII	
Wythe, part of, in freeingII	12	English bottoms, law favoringIV	74
Resolution of R. H. Lee freeingII	11	Enumerating enactments of	14
Restraint, British, of trade and			=0
the revolutionIV	87	EnglandIV	70
Restraining legislation, benefits		Expansion of American, (O. P.	-
ofIV	85	Austin)IV	33
Territory claimed by	265	Expansion of American, assuredIV	61
Tobacco, early importance ofIV	71	Farm areas in the westIII	364
(See also trade, commerce, ship-	·	Foreign enmity unavailingIV	39
building)		Foreign trade of U. SIV	110
Colonization		Franklin's Canada PamphletIV	76
Success of, conditions ofIII	14	Future of American, in Orient IV	200
Colorado	1.4	Government andIV	
AdmittedIII	277	HistoricalIV	33
Industries of	0/0	Iron, colonial manufacture ofIV	81
Industries ofIII		Labor bureau, andIV	
Territory of, formedII		Lake, and U. S. steel corpora-	020
CruiserIX		E CONTRACTOR CONTRACTO	1.40
Columbia school of minesVII	302	tionIV	146
Columbia university		Lake lading methods, excel-	
Architecture of	274	lence ofIV	146
Expansion ofI	190	Laws restraining, in the colonies IV	70

Commerce - Continued.	Commons, John R
Lakes, great, of the (Ray S.	American people, the
Baker)IV 141	Crime and poverty in citiesX 128
Ships of theIV 143	EconomistVIII 26
Tonnage ofIV 145	Labor and immigrationVIII 236
Lumber, AmericanIII 355	Open shop policy
Manufactures, embargo on co-	Open shop policyVIII 199
lonial 75	Communication
Molasses act of 1733, effect of IV 83	United States, supremacy ofIV 37
National trade policy, need ofIV 126	Competition
Navy, the	
Railroad regulation, (R. M. La	
Follette)IV 294	Railroad rates
Railroads in AmericanIV 199	Wages andVIII 270
Republican party cause of in-	Compressed air
creaseII 393	and its application in the me-
Restraint of colonial, Edmund	chanical lines.
BurkeIV 85	(W. O. Duntley)VII 240
Restraining laws, benefits of, onIV 85	Chisels, forVII 250
Retaliation by EuropeII 390	Coal mining, andVII 253
Revolution, American, British	Convenience ofVII 248
restraint and theIV 87	DrillsVII 252
Revolution, cause of AmericanIV 66	General uses ofVII 249
Salesman, the American, (E. W.	HammersVII 25: Handwork, replacesVII 24:
de Bower)IV 506 Seas, freedom of, established	HoistsVII 25
by U. SII 168	Mechanics, value of inVII 23
Shipbuilding, early AmericanIV 68	Painter's trade, andVII 25
Shipbuilding in 1820IV 101	RivetingVII 24
South, development of the,	Rust cleanerVII 250
(Charles M. Harvey)III 371	SawsVII 25
Standard oil, andIII 192	Street cleaningVII 25
Statistics, bureau ofIV 519	Turbine enginesVII 25
Statistics of American since	Comstock lode
1870 34	Development ofVI 2
United States, supremacy of, in. IV 34-8	Fire ofVI 2
Tobacco culture, England for-	Methods developed byVI 20
bade insular	Sutro's workVI 28
Tobacco, early importance ofIV 71, effect of enumeration onIV 73	Temperature inVI 20
Tonnage, American, and Euro-	Conant, Charles A
pean compared	American interests in OrientII 248
West, definition of theIII 363	Concord, U. S. gunboatIX 296 Confederacy, the
West, the, general effect of open-	Great names of
ing ofIII 22	Strategically consideredIX 190
Western, (L. M. Shaw)III 363	Confederation, articles of
Wheat, influence of, on	Congress
(See also industry, manufactures,	Continental, work of II 10
trade, Great Lakes)	Duties of, Justice John Mar-
Commerce, interstate, commission	shall
Constitution, and theII 66-68	Labor legislation, andVIII 81
Constitution, andVII 271	Pan American, of 1826 and 1890 II 198
Crippled	Right of, to control trusts, (P. C.
EarlyIII 21	Knox)III 204
Gibbons vs. Ogden, decision inII 69	Treasury, power over, check to
Commercialism	executiveII 213
Spirit of, in America	Connecticut, battleship,IX 303
True spirit of	Connellsville
Commission, industrial (see indus-	Coke region, (F. E. Saward) VI 193
trial commission)	(See also coke)

Conspiracy	Cooley, Thomas M
Labor andVIII 199-200	Higher education
Consolidation (see trusts and banks).	Cooper, James Fenimore
Constitution, American	Cooper, Peter
Affecting railroads	Atlantic cables, andVII 129
Basis for a world constitutionII 31	Built first locomotiveIV 384
Basis of 78	Cooperation
BattleshipIX 35	Dairying, andV 195
Civil war andII 72	Cope, E. D
Decision in Gibbons vs. OdgenII 69	Discoveries ofVII 53
Of Harland on railroad ratesII 73	Copper
Supreme court on corporate	American copper ores, (A.
franchises	Lakes)VI 260
Dependencies, no place in, forII 202	Arizona districtsVI 263
Difficulties, early, with	Arizona minesVI 265
Filipinos under, rights ofII 202	Development of in the westIV 291
Gladstone, W. EII 60	Export trade inVI 256
Holds the union indivisibleII 75	History in U. S., early VI 252, 254, 262
	How copper occursVI 253
Interreted by Supreme courtII 73	
Interstate commerce, andII 68	Japan in, industryVI 254
Legality of the union and	Lake Superior regionVI 254
Meaning of, John MarshallII 203	Lake Superior regionsVI 264
Morris, GouverneurII 202	Mexico, in industry, quick
Opinion on, Judge CooleyII 62	growth ofVI 254
Organization of government	Mined and extracted, howVI 257
under	Ore in different parts of U. S,VI 260
Representation and	Principal American regionsVI 261
	Production of by statesVI 255
Safeguards of, unwrittenII 206	
Supreme court and II 62	Production since 1801VI 253
Tariff inII 315	Properties ofVI 256
Undesirable checks of	Spain leads Europe inVI 254
Constitution, British	Supremacy of U. SVI 253
Evils of unwritten II 57	Western bedsVI 261
Not unwrittenII 65	World's supply of, (Jos. M.
Constitution, United States, March	Sheahan)VI 252
of, (G. R. Peck)	Mining of, in U. S., earlyVI 4
ShipIX 35	(See also mining)
Consuls	
	Corn
Commerce, as aid to	(C. F. Millspaugh)V 158
Consular service	Area and productionV 5
Foreign trade, value of inIV 117	Broom, (see broom corn)
Consumption	By-products, uses ofV 164
AmericanIV 2-4	Classification ofV 158
Continental Congress	Colonists, devastation of fields
Vote and debate on independ-	byV 161
enceII 18	Cooking, aboriginal methods ofV 160
Work of, in 1776	Crop, greatest of AmericanV 163
Convention, constitutional	
	Crop of 1904IV 164
Meeting of	Exports 31
Need of	First American crop
Veto power, plans for	History
Converse, John H	Incas, the and
American locomotives	Indians, cultivation by North
Convict labor	American
Industrial commission onVIII 43	Mexican method of grindingV 161
Convicts	
In Chicago jailsII 109	Origin in the Andes V 159
	Production
Statistics of Joliet prisonII 109	Religious significance
Cooke, Rose Terry	Starch and glucoseV 166-71
Novelist	Sweet corn, valued food
Cooley, Judge	Corners, on stock etc., (see specula-
The constitution	tion and individual names)

Corporations	Cotton continued
Business, early	Exports, 1870-1904 14
Commerce, bureau of andIV 521	Exports of rawV 3
Detested in Jackson's timesIII 43	Farmers, character of
Influence ofIII 377	Flax consumption, and V 13
Law and lawyersX 308	Foreign trade inIV 1
Part in progress, (W. R. Law-	Future demand for, (J. L.
son)III 377	Watkins)
Railroads, organization of,	Future of American (J. L. Watkins) V 13
(George T. Sampson)IV 367	Future U. S. fields
Rights of, decision of, Chief	Georgia, introduction of, intoIII 2
Justice TaneyII 71	Gin, effect of theVII 27
(See also trust companies)	Influence of V 10
Correspondence schools	Growth and exportsV 10
(See education)	HistoryV 10
Corruption	EarlyV 12
(J. W. Folk)	Horsepower in, millsVII 21
Bribery evils	India andV 110
Causes of official	Indian exportsV 14
Civic officialsII 122	Industry, in the west, earlyIII 1
Cure of official	Japan, mills of, a menaceII 25
Machine in cities, the	Linen and wool substitute V 13
Nomination by popular voteII 397	Decline of V 13
Political, following civil service	Loom inventors, English V 13
actII 407	Machinery, (D. C. Roper)V 129
CorundumVI 327	Mill, first AmericanV 108
Deposits	Oriental industry, changes inV 14
EmeraldsVI 330	Oriental tradeIV
In U. SVI 327	Other fabrics, and
Mining of	Peru, and
North Carolina minesVI 328	Philippine islands and IV
Properties ofVI 327	Price and crop valuesV
TopazVI 330	Prices, range ofV 10
Cos, General SoldierIX 41	Production, American and
Countryman, Wm. A	world's comparedIII
WatchesVII 351	Production, recentIII 37
Cotton	Production since 1850 3
American cotton beltV 110	Rise of in U. SV 14
Area and production 6	Russia and EgyptV 14
Brazil andV 140	Russian productionV 14
Buyers of American V 143	Selection, artificial
By-productsV 113	Silk, a substitute for V 13
Calico andV 142	Converted into
China as buyer ofIV 115	South American tradeIV
Civil war, and theV 108	Manufactures in III 175, V 11
Colonies, in the	Mills in theIV 6
Consumption, general increase	(Speed, John Gilmer)V 10
in	States, cotton, record of theV 11
Consumption, and woolV 136	Supply, U. S. world's V 14
World's	Varieties ofV 11:
World's, 1870-1900 V 136	Weaving of, first
Crop, comparative value ofV 114	West Indies, indigenous toV 10 Western hemisphere andV 10
Crops, first American	Whitney's invention
Crops, other, and	Wool decline of V 13
Cuba andIV 14	Wool, decline of
Culture of, in west, general effect	Cotton machinery
ofIII 22	(Daniel C. Roper)V 129
Discrimination, freight, reme-	Bale press inventionsV 133
diedIII 215	Bale pressingV 133
EgyptianV 142	Capacity of new and old plantsV 13
Egyptian productionV 141	Gin, effects ofV 13
European supply, earlyV 140	Ginnery, a modernV 133

Cotton machinery—Continued.	Crime—Continued.	
History 129	Prisons, good done byX	260
Lint, preparingV 133	purpose ofX	
Cotton seedV 115	Races andX	134
Allied industriesV 124	Railroads andIV	
Appreciation of	Reformatory methods, evolution	
By-productsV 119	of, (L. D. Drake)X	262
"Cake"V 120	Statistics of in Chicago and	202
"Cake," value of V 121		1.00
Capital investedV 123	IllinoisII (See also cities)	109
Chemical analysis V 120		
Consumption, AmericanV 126	CriminalsVIII	191
Consumption, foreign and Amer-	Normal men andX	41
ican	Crockard, Frank H	71
Control of, American	Blast furnacesVI	87
Distribution, geographical, of	Crocker, F. B	0.
industryV 122	Advantages of electric motive	
ExportsV 123	powerVII	228
Exports of productsV 121	Crops	220
FertilizerV 123	Value ofIII	480
Food for cattleV 119	(See also agriculture, farmers)	100
Food, as human	Crothers, Thomas Davidson	
Growth of industryV 116	DrunkennessX	176
History, earlyV 115-16	Crown Point horrorVI	21
Hulls, value ofV 120	Crowell, Jno. Franklin	
Industry, C. M. DaughertyV 115	American primacy in iron and	
AbroadV 125	steelVI	112
Oil a substitute for lardV 118	Shipbuilding, present and future	
Oil, manufacture ofV 120	of AmericanIV	129
Percentage of crop utilizedV 124	Crozat, Antoine	
Products of, uses ofV 117	Louisiana charter grantedII	268
Stability of industry V 123	Crozier, Alfred O	
Statistics of industryV 122	Expansion of organized charityX	18
Wages in industry of V 123	Cruger, Mrs. Van Renssalaer	366
Cows (see dairying)	Cruisers (see navy, the)	220
Courtright, Mortimer W	Crystal, rockVI	339
Telegraphs, on recent progress ofIV 480	American, machinery, inVII	201
Court, Supreme	As means to Latin tradeIV	63
American System of, the, and	Cause of Spanish warIX	65
what it acomplishes, (Simeon	CharitiesII	
E. Baldwin) II 76	Commerce of	
Constitution, and members of,	Cotton andIV	14
in II 62, 91	Death rate, changes inII	304
Sugar trust decisionIII 208	EducationII	306
Countryman, Wm. A	Improved inII	305
WatchmakingVII 351	Foreign policy, effect of onII	127
Crampton, Charlotte 309	Foreign relations andII	199
Crawford, Marion 365	HospitalsII	
Cream (see dairying)	Industry of, revivedII	
Creelman, James	PrisonsII	
New York's subwaysIV 451	RailroadsII	310
Crime	Rations distributed to poor ofII	303
Jails, schools for	Rights ofII	
Legal aspect of, in cities, in state, In nationII 109	SanitationII Soldiers, relief of CubanII	
LynchingsX 134	Spain notified to vacateII	
Minor, too severely punishedX 256	Tariff reducedII	
Negroes and	Tobacco and sugarII	
Pauperism, percentage of, to	What U. S. has done for, (C. R.	55.
crimeX 137	Edwards)II	302

•	
Culture, physical	Dairying—Continued.
Need of, education	New England, in
First American	Products, value of 195
Currency	Statistics for 1900V 195
Philippine islandII 293	Whey, production and value of V 205
(See also finance)	Dakota
	Territory of formedII 274
Workmen, American, andVIII 15	Dakotas the
Cutter, Charles Ammi, The Develop-	Railroads, North and South
ment of Public Libraries X 275	Dakota helped by
Cyanides	Dalton, John, physicianVII 419
Process in miningVI 227	Daly, Augustin
(See also mining)	Danford, Ebenezer
Cyclones (see weather, relief)	Daniels, George H
Cushing, William B	Railroad EmployesVIII 324
Feat ofIX 261	Railroads in American commer-
Curtiss, George B	cial growthIV 199
TariffII 318	Danville, Ill
D	Home for soldiers atIX 428 Dartmouth college
D	CaseII 203
Da Costa, Dr	Charter case, legality ofII 101
Daft, Leo, electrician	Thaver schoolVII 302
Dairies	Webster, in charter case ofII 102
Adulteration of productsX 294	Daugherty, Charles M
Dairy products	Cotton seed industry V 115
Value of	Davenport, Thomas, electricianVII 127
Dairying (H. E. Alvord)V 194	Davidson, John Wynn
Associated system of U. SV 195	Sword of
Babcock test, influence ofV 199	Trusts, prophecy of, concerningIII 169
Butter and cream, ratio ofV 202	Davis Havne
Machinery, new	Declaration of independenceII 26
Prices	Davis, Jefferson
Prints and rollsV 201	Western railroads surveyed byIV 273
StatisticsV 200	Davis, N. S., physicianVII 41
Casein, manufacture of	Dawson PhilipVII 278
Value and uses of V 204	Day, David T
Cheese statisticsV 204	PlatinumVI 29
Consumption of dairy products	Dayton, Ohio.
in U. S	Soldiers' home atIX 41
Co-operation in, early	De (For French names see the
Cream gatheringV 198	patronymics)
Gathering, statistics ofV 198	Deaf mutes
Sales, statistics of	Care of
Separators tatisticsV 199	Helen Keller X 15
SeparatorsV 198	Dearborn, Henry, soldierIX
ExportsV 208	Death
Early	Dooth Valley
History, early	Borax inVI 41
Increase of industry in U. SV 194 In U. S., earlyV 196	De Bower Edward W.
ImportsV 207-8	The American salesman
Milk. condensedV 205	De Bower, Herbert Francis
Condensed, statistics V 206	Building and loan associationsX 22
Condensed, value of	Debt, national
Consumption	Industry after 1812, effect onIII 3 Paid in 1832III 3
Production and prices V 207	Since 1898III 39
Skim, sales V 203	Since 1898

Decatur, Stephen	Department stores	
Before TripoliIX 255	Consumer, help theIII	96
Career ofIX 255	(See also trusts, industry)	
Naval officerIX 35	Depoele, van, Charles J., electrician. VII 1	
Sword taken byIX 397	Detmold, Wm. surgeon VII 4	132
	Devine Edward T	
Declaration of Independence	Emergency relief in disastersX	77
(Ida M. Tarbell)II 10	Dewers W. P., physicianVII	414
Adams, John	Dewey, GeorgeIX	262
Brewer, David JII 108	Manila bay, atIX	242
Government, confided to theII 24	Sword ofIX	393
Jefferson, written by II 14	Diamonds	
Outcome ofII 26	Blatchley's list ofVI	327
Preserving the documentII 24	Found in U. S VI	325
Riots caused byII 22	Mining of, in AfricaVI	27
Severely criticised by the	U. S. geological deposits, andVI	326
	Dickinson, John	
COLIB CODDITION OF THE COLUMN TO THE COLUMN	Opponent of colonial freedomII	12
Signing ofII 21	Dingley lawII	337
Deering, William	Reciprocity andII	381
Harvesters of 91	Diplomacy American	
Defectives	(John Bassett Moore)II	158
Care of	(John Hay)II	
De Forest, Robert U	(Richard Olney)II	
Tenement house regulationX 193	Agreements other than treaties	
Degeneration	(Charles C. Hyde)II	216
Drunkenness andX 176	Alabama settlement,	
Deidesheimer, Phillip, mining engineer VI 24	claims, terms of II	165
Delaware	Arbitration, in internationalII	
Vote of, on American independ-	Blockade, forces definition of	
enceII 13	validII	167
Demagogues	Cable, support of PacificII	146
Labor andIV 516	Clayton-Bulwer treatyII	
Democracy	Democracy, fundamentalII	
American, a farce	Diplomats, charcter of Ameri-	102
Individualistic I 96	canII	214
Australian, widest 4	Expansion, territorial, andII	
Education and, (Vida L. Scudder)I 245	ExtraditionII	
Energy, incentive to 53	Foreign born citizens, rights	
Foundation of	ofII	171
Fundament ofII 162	France and neutral rights II	
Immigrants and 3		
Isolation of working classes 245	French alliance, rejection of	101
Typical American	proposed in 1793II	150
Democratic party	French army commissions pro-	100
Resolution to fix majority of	h'bitedII	162
Supreme courtII 86	French Revolution andII	161
Tariff andII 332	Government, hindered by form	101
Dennison, A. L.	ofII	919
Watch industry andVII 354	Growth of American II	194
Densmore, James, typewriter makerVII 367	Hay-Pauncefote treatyII	160
Dentistry	Holy Alliance andII	160
Association, first dentalVII 440	Hague convention, terms of II	109
Associations of, AmericanVII 440		220
Education, modernVII 439	Freedom of, declared by C-ayII	169
History, earlyVII 437	History of	
Improvement in instrumentsVII 442		
Legislation uponVII 443	The state of the s	147
Literature, American dentalVII 441	McKinley andII Military policy of U. S.,	14/
Progress of in U. SVII 437		110
School of, firstVII 438		116
(See also medicine and surgery)		145
(was morrous and suighty)	Monroe doctrine, declaration of II	170

GENERAL INDEX

Diplomacy—Continued.	Drills—Continued.
Napoleon's wars, defines neu-	PneumaticVII 252
TI 163	(See also mining)
trality in II 163	Drugs
Napoleonic warsII 162	Adulteration ofX 290
Need of enlarged agencies II 149	Additionation of
Neutral rights, Great Britain and 11 166	(See also adulteration).
Struggle forII 165	Drunkenness
Neurality law, firstII 164	Charity, pauperism, andX 16
Neurality law, his	Crime and
N. W. territories barred from	Cures forX 186
colonizationIl 170	Decline ofX 178
Orient, policy in the	Decime of Devideon
Pacific Islands	Drink problem (Thomas Davidson
Prussia, early treaty withII 160	Crothers)X 176
Reciprocity, (John Hay)II 146	Evolution ofX 179
Reciprocity, (John Hay)	History of
Rivers, free navigation of inter-	Hospitals for inebriatesX 187
nationalII 168	InheritedX 180
Seas, freedom of, established byII 168	X 179
Senate a check on	Insanity, asX 179
Suez canal treaty	Jews andX 63
Supreme court, members of, inII 91	Marriage andX 181
Treaties with France, early1I 159	Moral feeling and
Treaties with France, early	Nutrition and
Triumphs of American, (John	Prevalence ofX 176
Hay)	Types ofX 178
United States leader in neu-	Types of
trality laws	Duane, James
Disarmament, American	Debate on colonial freedom II 13
Disarmament, American.	Dubuque, gunboatIX 304
Disasters	Dudley, Benj. Winslow, surgeonVII 431
Relief III. (E. I. Deville)	Duffield, Hamilton P
Discrimination (see railroads, trusts)	Adulteration of food and medi-
Disease (see health and immigration)	cine X 288
Dispensaries	cine 22 200
Dodge, W. C	Duluth
Invention and American wealth, VII 267	Wheat trade of V 157
Invention and American weath.	Dunbar, C. F., economist
Dogs	Duncan, James
Farm animals 47	Trade unions an influence for
Dolboon Professor	industrial peaceVIII 178
Telephone, inventor ofVII 138	industrial peace
Dolge, Alfred	Dunderberg, the, iron cladIX 327
Wage scheme ofVIII 292	Dunnite (see guns)
Wage scheme of	Duntley W O
Douglas, James.	Compressed airVII 240
Transcontinental lines, American, 1 v 210	Durand, Edw. Dana, economistVIII 26
Dolphin (U. S.S.) IX 292	Railroads, interurbanIV 419
Dorson Owen	Railroads, interurban
Rake invention ofV 88	Duties of Citizenship
	(David J. Brewer)II 108
Drainage.	Dutton S T
Canal, Chicago, and American	Educational resources of the
machineryVII 204	community 1 69
(See also canals.)	Community
Dualto Isyman D	DyesVII 3
Reformatory methodsX 262	Discoveries III
Drake, Rodman	Dynamite (see guns)
Drake, Rodman	
Drama (see theaters)	E
Dred Scott case	1
Chief justice Taney on	
Oninion of Justice Campbell	Earth, the
D Walton	Soils, geology of AmericanV
Closed shop contractsVIII 218	Economics
Closed shop contracts	AmericanVIII 2
The law and closed shopsVIII 21	Economy of production (see indus-
Drews, the, players	try trusts, production)
75 -111-	yes to the political
Floatric in mining I TT	5 Economy, political (555
Interest of the second of the	
Metal workingVI 28	economy)

Edgerton, Charles E. economistVIII 2	26	Education—Continued.	
Edison, Thomas A		Foreign prejudiceI	12
Beginnings of incandescent		Freedom in studiesI	
lampVII 19	94	Future men andI	232
Duplex telegraphVII 13		Future of small colleges, (W. R.	
ElectricianVII 13		Harper)I	16
		General land grant bill, terms of .VII	
Methods of workVII 13		Georgia's systemI	
Telephone, inventor ofVII 17	19	German and American high	2.4
Education			11
Acinevement	94	schools comparedI	
Transfer or managed the contract of the contra	98	Gives high potentialI	
22220210210111	97	Government and higher	
American colleges, (N. M. But-		ControlI	
ler) I 15	54	Graded schoolsI	
American reforms in, (C. W.		System of U. SI	
	89	Gymnasia, need ofX	
American school boy, the (L. H.		Health andI	
Gulick)	25	Home andI	
American universities, (E. H.		Hostility to large institutionsI	
Warfield)I 18	86	Huntington, C. P., onI	
American university ideals,		Independence, local, inI	9
E. G. Hirsch I 19	97	Industrial and technical training	10
And commercial development,		in popular, (H. S. Pritchett)I	
(H. J. Rogers)III 30		Industrialism andI	
Armstrong, H. E., on I 12		Industry andIII 313	
Attendance, percentage ofI 26		Influence ofI	
Catholic, must be 1 24		Inefficiency of general systemI	
Child labor and		In U. S. early	9
	71	Laboring classes, not sought	0.4
Cities and, congestion of I 13		byI	
Citizenship and		Laboring men, forI	
Co-education, evil of		Lands, value of nationalI	
College requirements not uniform. I 12		Leo XIII andI	
	82	Library andI	
Statistics of agriculturalV 6 Compulsory in U. SI 10	60	Library, public schoolI	
Consanguinity of, and labor,	02	Manual, trainingVIII	
(W. J. Tucker)VIII 42	26	Masses, elevating the, byI Mental, overestimatedI	
	84	Migration of studentsI	
Corruption and	- 1	Missouri Supreme court onI	
	86	Money spent onVII	
Criminals and manual trainingVIII 42		Moral, must be	
Cuba andII 30		Morality andI	
CubanII 30		Religion, andI	
Curricula, public school 1 10		Morals, public, raised byI	
	69	Moseley report on	
Democracy a farce	47	MuseumsI	7
Democracy and, (Vida L. Scud-	- 1	Music, teaching of	
der) I 24	45	National life andX	
Dominant force	70	SystemI	
Effects of, early 28	259	Nature studyI	
Effeminizing of boys 12		New York system 1 99-	
	90	NewspapersI	7
	83	Parental influenceI	
Environment and 1 18	52	Philanthropy, expenditures in	
Equality and [96	Educational, (R. A. Woods)I	26
Europe and United States com-		Organized (R. A. Woods)X	5
_ pared 1 10	02	Porto RicanII	
Federal government, part of, inI 10	01	Poverty andI	7
Fire drill I 13	30	Precocity, AmericanI	
	85	Preparation for life I	

Education—Continued.	Education—Continued.
Principles of American, (N. M.	Universities and industryIII 319
Butler)	University education for busi-
Productive capacity andI 269, X 55	ness men, (S. N. Patten)I 218
Professional schools 1 176	University of Michigan, pioneer in VII 302
Public duty inI 97	Vocations andI 267, X 53
Indispensable	Webster, Daniel on
Public school system, (R E.	Working classes andI 268, X 54
	Separation of
22482207, 111111111111111111111111111111111111	Working men, lectures to 247
T CLIEBULITION OF POST OF THE	(See also architecture, the blind,
Purpose of	colleges, dentistry, libraries,
Pprimary, of	medicine and surgery, Roman
Religion, and (A. T. Hadley)I 257	Catholic, social question)
And collegesI 172	Education, Agricultural
And	Need of the, for
(S. T. Dutton)	Federation of rural social forces,
Classified	(K. L. Butterfield)V 354
Roman Catholic universities,	Kinds neededV 421
(J. F. Mullaney) 207	South the, andV 385
School age, the 1 123	Wilson, JamesV 406
And 71	Education, Technical
Curricula of high	Ability and opportunityVII 294
Efficiency of public I 112	American, earlyVII 297
Equipments of public I 107	Arguments forVIII 420
Private 82	Berlin
Public I 82	Brooklyn polytechnicVII 302
High I 115	Civil war, after the
Technical	Columbia school of minesVII 302
Sports in public I 128	Culture, general, andVII 297
Unchartered I 82	Curriculum of manual training
School buildings, character of	schoolsVIII 422
U. S	Definition of training
Secondary, importance of I 120	Demand for trained workersI 144
Public 113	Democracy andI 29
Social 52	Education for engineer, properVII 292
Question and I 206	General and special I 136
Rank inVIII 430	German and American comparedI 141
Socialism and I 79	German schools and wage
SocietiesI 76	earnersI 145 Graduate coursesVII 310
State gifts to	Graduates, standing ofVII 312
	History of, ancientVII 290
Rights of theI 237 States and cities, variousI 101	Laboratory workVII 309
Statesmen, morals of	Land grant billVII 303
Systematic studies	Lawrence scientific schoolVII 300
Statistics, public school	Livelihood and 135
Talent saving and	Manual training school, curri-
Taxation andI 86	culum of St. LouisVIII 421
Teacher, training theI 111-12	Definition ofVIII 419
Teachers, esprit of American I 111	Manual training in public schools
Heroism of college 167	(H. E. Back)VIII 419
Percentage of men 1 127	Origin ofVIII 420
Residence I 87	Manual training schools, varieties
Weakness of women I 126	of schoolsVIII 421
Text-books, public schoolI 108	Massachusetts institute of tech-
The educated man and the State	nologyVII 302
(H. S. Pritchett) I 234 Types in U. S	Moselev commission, onVIII 12
Universality of	' l
Chiversamy of	

Education, technical—Continued.	Electricity—Continued.
Navy enlistment and	Electricians, eminent AmericanVII 137
Effect of	ElectrolysisVII 143
Numbers available for 1 133-4	D-6-4 # VII 146
Organized labor and	Defects ofVII 146
Progress of engineering, (R. H.	Diaphram inVII 147
Fernald)VII 290	ElectroplatingVII 148
Public system, benefits of aI 148	Energy, production ofVII 142
	Farmer's magnetVII 127
Rensselaer instituteVII 298	Farmer's magnet
Curriculum atVII 299	Field's inventionsVII 139
Results ofVII 313	Franklin's workVII 109
Schools and feesVII 311	Furnace, the electricVII 143
Correspondence I 143	Gases, production of, byVII 151
Sheffield schoolVII 301	Gun-firing byIX 389
Specialism, evils inVII 295	Company Dy 21/
Specialists as teachers I 151	Guns andIX 314
Spread of, plans for I 137	Henry's workVII 114
Statistics ofVII 306	Hewitt, Biographical sketch of
Stevens instituteVII 303	P. CVII 188
Success of manual training	Hewitt lamp, use ofVII 191
school	Hewitt's conversion of alternat-
Thayer schoolVII 302	ing into direct currentsVII 184
	InterrupterVII 186
Training manual, early history	
ofVII 298	Inventions, (Ray S. Baker)VII 183
Washington and Lee university VII 303	Vacuum lampVII 183
West PointVII 299	History in U. S., earlyVII 140
Early atVII 297	History of, in U.S., (G. H. Stock-
Edwards, Clarence R	bridge)VII 109
CubaII 302	Incandescent lamp, invention
Edwards, Jonathan I 351	ofVII 157
Edwards, William M	Success ofVII 16
Provision for the insaneX 104	Plants, number ofVII 158
	Industrial electro-chemistry,
Eggs	
ProductionV 30	(E. F. Roeber)VII 14
Egypt	Invention of lamps, (T. A.
Cotton productionV 141	Edison)VII 19
Culture inV 145	Lighting, earlyVII 15
Elberfeld	New era of electricVII 15
Charity system	Martin, T. CVI 3
Electric power	Ore reduction byVII 15
Cheapness ofIII 349	Page's inventionsVII 12
Limit to big transmissionIII 354	MeritsVII 12
	Railroads, electricVII 13
Organization easyIII 353	
Small concerns, feasible forIII 351	Refining, electroVII 14
Electrical invention (see invention)	Science of, (see physics)
Electricity	Storage batteries, future ofVII 15
American progress unrecognized. VII 124	Sturgeon's workVII 11
Arc lights, development ofVII 158	Telegraph, first electro-magnetic.VII 11
Arc lamps, enclosedVII 161	Telephone, invention of, (A. G.
Invention ofVII 156	Bell)VII 17
Alternating current and electric	Tesla's earth currentsVII 16
lightingVII 160	Thomson's workVII 13
Aluminum madaraina	Undulatory theory, Bell'sVII 17
Aluminum, producingVII 144	
Brush, C. F onVII 138	War shipsIX 28
DavenportVII 127	Weston's inventionsVII 13
Distribution, economy of power,	Wireless, (Nikola Tesla)VII 16
(Louis Bell)III 345	Wireless stations, Tesla's plans
Dynamo, effect ofVII 141	forVII 16
Edison's bamboo experimentsVII 196	(See also mining, motive power,
Carbon experimentsVII 194	Niagara, railroads, telegraphs,
Lamp, success ofVII 197	and the telephone)
Edison's work	
Electric light, (Louis Bell)VII 131	Electrolysis (see electricity)
Liberto fight, (Louis Bell)VII 154	Electroplating (see electricity)

Elevators, grain	Engineering—Continued.	
CapacityIV 164	Machinery, and economy ofIII	260
Capacity, of, increasingIV 166	Manufacture an engineering	
Kinds ofIV 164	propositionIII	259
Machinery of	Marine engines, AmericanVII	284
Modern, (Day Allen Willey)IV 163	Mechanical, in U. SVI	446
Motive power ofIV 168	Mistakes, prevent businessIII	261
SteelIV 167	New York metropolitan railroad	
StorageIV 164	plantVII	
Operation ofIV 166	Railroads, routes of westernIV	274
Structure ofIV 165	Societies helpful to businessIII	262
TransferIV 164	Success, records in businessIII	260
TransferringIV 168	Superheated steamVII	288
(See also wheat)	United States navyIX	341
Eliot, Charles W	(See also education, technical)	
American reforms in educationI 89	England	
Reformer, as educational 192	American heritage fromII	
Elliott, Jesse Duncan	Commerce, and early AmericanIV	67
Sword ofIX 394	Lawyers inII	100
Ellis, Alexander J	Shipbuilding, influence on Amer-	
And A. G. BellVII 171	icanIV	
Elmer, Jonathan, American physician. VII 407	Tobacco culture prohibited inIV	73
Elwell, F. E	Ennis, William D	
American art 331	Engineering in industrial worksIII	257
Elwood, Charles, sociologistVII 101	Entomology	
Ely, Richard T	Debt to, world'sVII	33
Government investigation of	Equitable Life companyIII	461
laborVIII 24	Equitable Life insurance Co	
Ely, William T	An exemplarIII	471
Political economistVII 95	Ericsson, John	0.0.4
EmeraldsVI 328	Railroads andIV	234
Emerson, R. W 1 358	Erie railroad	0.0
EmeryVI 436	PlannedIII	26
Emory, Frederick	EtherVII	427
Competition, foreign view of	Discovery ofVII	414
American	Europe, introduced intoVII	410
Foreign trade of U. S	Morton, used by W. T. G VII Ethnology	410
Engines, gas	Governments work inVII	42
NaturalVI 391	Europe	74
Number of in U. S VII 216	States of, modeled after Amer-	
Engines, turbine (see turbine engines)	ican unionII	26
(See also engineering)	Eustis, William	
Accounts, daily, the curve ofIII 261	War of 1812 andIX	28
Allis-Chalmers Milwaukee plant. VII 283	Evans, Oliver	
American and European plantsVII 282	Railroads andIV	235
American steam, (Philip Daw-	Eve, Paul FitzsimmonsVII	431
son)VII 278	Expansion, American commercial	
Boston railroad plantVII 279	(O. P. Austin)IV	33
Bridge building andIV 402	Anglo-French treaty 1763II	268
Business and	Area and population 1790 to	
Capital, relations of toVIII 360	1900II	267
Centurys progress in (R. H.	Commercial, assuredIV	
Fernald)VII 290	Diplomacy, and AmericanII	
Commerce, its uses inIII 259	Early CaliforniaII	
Continental enginesVII 286	Foreign trade andIV	
Cooling towersVII 288	Hawaii, annexation ofII	
Development of steam enginesVII 279	Louisiana purchased by U. SII	
Engineer as an employerIII 262	Louisiana purchase territory,	
History of, earlyVII 290	present production ofIl	27
Horizontal and vertical engines. VII 286	Terms of	[27:
Industrial works, in(W. D. Ennis) III 257	Successive political divisions of, II	27:

Expansion—Continued.	Factories—Continued.
Mexican territory, political di-	Hopedale, MassVIII 333
	Inspection ofVIII 76
vision ofII 285	Growth ofVIII 79
Population of in 1850II 285	0.20 11 0.00 0.00 0.00 0.00 0.00 0.00 0.
Mexico, statistics land ceded by . II 286	Zie ii bi committee ii i
Mississippi, French explorers ofII 267	Development of
New Mexico and California	Enforcing lawsVIII 76
acquisition of	English, onVIII 50
Oregon acquiredII 284	Growth ofVIII 88
de Pinedo, Navarez, and DeSoto	Illinois, onVIII 52
visit of, to Mississippi	InterstateVIII 79
Purchases, table ofII 266	New YorkVIII 51
Territorial (O. P. Austin)II 265	Opposition toVIII 86
Territory claimed by coloniesII 265	Purpose ofVIII 46
Texas, annexation ofII 218, II 279	Supreme court onVIII 49
	Legislation, (G. W. Alger)VIII 46
History of	
Expansion through reciprocity	Legislation and inspection, (Sara
(John Ball Osborne)II 375	S. Whittelsey)VIII 70
Exploration	Legislation, causes ofVIII 72
Explorers American, earlyIV 270	Theory ofVIII 47
Lewis and ClarkIV 272	Lowell, earlyVIII 338
Lieutenant PikeIV 273	Ludlow, MassVIII 332
Explosives (see guns)	Morals of employeesVIII 342
Exports and imports	National Cash Register CoVIII 336
American exports to the worldIV 41	Peace Dale, R. IVIII 334
Changes in American, relativeIV 46	Plan, of Nelson's, N. OVIII 334
Exports 1820–30IV 105	Profit sharing, (N. P. Gilman)VIII 302
	Ruralization ofVIII 330
In 1904	Skill, encourageVIII 343
Fruit export tradeV 250	
Growth, slow, of American	Social life, have raisedVIII 341
exportsIV 10	Sweatshops not due to VIII 342
Increase of American exportsIV 34-5	Towns, buildingVIII 331
ImportsIV 43	Women in earlyVIII 339
Increase of	Workers, comfortsVIII 320
Under early tariffII 317	(See also child labor, labor, work-
Iron and steel	men, industrial commission).
Manufactures exported in 1904IV 112	Fairbanks, Charles W
Exports, percentage of agri-	American political policiesII 393
culturalV 391	Family, the (see woman)
Value of agricultural exportsV 9, 14	Famine (see relief)
Expositions	Faraday, Michael
Education, industrial, at ParisIII 306	Discoveries ofVII 28
Zadowion, manning, av i am,iii 500	Farms
77	
F	American, famous
773	Dalrymple
Factories	Federation of social forces,
Age limitation of workersVIII 71	(K. L. Butterfield)V 35
As social element, (C. D.	Intensive farming, (B. T. Gallo-
Wright)VIII 338	way)
Bathing and sanitationVIII 329	Largest in world, (John H.
Child labor, acts provoked byVIII 73	Raftery)
Cleveland Cliffs Iron CoVIII 335	Miller, farm
Congress, and powers ofVIII 81	Annual cost ofV 32
Courts and factory legislation	Surplus, national farm (George
(G. W. Alger)VIII 46	K. Holmes)
Drama of furnace, forge, and	Traction engines onV 33
shop, (Day Allen Willey)VI 264	Twentieth century, (E. P.
Educational influence ofVIII 341	
	Powell)V 43
Factory, machine shop, and	(See also agriculture)
mine, (C. B. Going)VIII 326	Farmer, Moses G
Girls, nationality of, inVIII 339	Electric light andVII 12
White, in southernVIII 340	ElectricianVII 12

Farmers	Federation, American, of Labor
Acreage values 40	
American (James Wilson)V 12	
Character ofV 55	and trades unions)
Book readers, asV 63	Fenger, Christian, surgeonVII 433
Bank deposits ofV 16	Fernow, B. E
Banking, number of	Fertilizers (see phosphate rock)
Boards of trade, and	Field, Cyrus W
Colleges, statistics of agricul-	Originator of cablesVII 130
turalV 60	(See telegraphs submarine)
Cotton, character of	
Crops on record, first AmericanV 21	
Total value of V 14	
Wealth of, inV 12	the gardenVII 105
Defects in work ofV 65	
Department of agriculture, debt	Field, Melville
to V 57	Views of, on the Supreme courtII 74
Education, influence of	Field, Stephen D., electricianVII 139
Farm property, value of	Figs
First American, (G. K. Holmes)V 18	American
Government help 27	7 LaborersVIII 251
Indifference of, toV 59	Missouri's resolution of sym-
Indians, early American, asV 18	8 pathyII 207
Intellectual, development ofV 6:	
Improvement of, evidence	Ricarte's insurrectionIX 78
ofV 6	
Methods of, improvident 5	5 1
New England, earlyV 29	
Number of, comparativeV 99	
Increase inV 2	
Organizations of	777 401
Property, appreciation of	
roporty, approcation of the tree of the tr	TYT 000
Revenue of, gross	
	Bank notes criticizedIII 395
Zililizoto, boooting	9 In circulationIII 395
	9 Issues of
Value of farms 2	Bank of U. S. chartered III 35
The Control of the Co	7 Of North America charteredIII 35
ZHOICESHIS	Banking, concentration of, in
(See also agriculture)	U. S., (C. J. Bullock)III 411 Banks and state controlIII 45
(See also various cereals and	Early AmericanIII 10
farm products)	Hamilton's and Jackson's dis-
Farragut, DavidIX 26	
Farson, John	Barings and Stephen GirardIII 405
Automobiles in AmericaIV 50	Burr, Aaron, inIII 406
Fashions	Capital in U. S., early foreign111 31
Paris, American fashion plates	Chase, Salmon PIII 404
inVII 20	Circulation in U. S., per capitaIII 398
Faucett, H. W	Corporate factors of, (W. Iv.
Cyanide, patent ofVI 23	Lawson)III 377
Fawcett, Edgar, novelist	Crop movements, treasury hold- ings and
Fawcett, Waldon	
Center of the world of steelVI 10	Depression of 1902III 476
Tranding raw intimes and the contract of the	Debt, national, since 1898III 392
Utilities for handling raw min-	Early American financiers, (G. A.
ing materialVI	TownsendIII 401

Finance—Continued.	Firemen		
Europe, influence of America	Duties of	nnion) Y	223
onIV	Heroes	X	222
Financial future of U.S., (F. A.	Lives of	X	224
(Vanderlip)	Motives of	X	224
Financiers	(See also buildings, high	a)	
Longevity of	Fiscal		400
Girard, Stephen	Expenditures from 1883		400
And the loan of 1814	Fish, Stuyvesant		
Death ofIII 4	Development of Ameri	.can ran-	00
Gold and other money in foreign	ways		234
countries	Fisheries		
And silver money, increase	Supreme court in Bel		91
ofIII 3	Fitch, John.		91
Backbone of American money	Steamboat, inventor of		159
SystemIII 3	Fitz, Reginald, physician	VII	435
Bulk of, in banks and treasury. III 3	Fitzmorris, Charles C		100
Excess of	Heroes of the navy	IX	259
Exports and imports from	Romance of the steamb	noat IV	159
1889 to 1904III 3	Turbine engines		
In banks and treasury bulk of .III 3	Weapons of destruction		
TreasuryIII 3	Flax		000
Production, world's,III 3	Area and production		
Reserve, notes andIII 3	Cotton consumption an	d V	137
To other currency, ratio ofIII 3	Crops, first American		21
Treasury, 1900 to 1905III 3	Flint, Austin, physician		
Greenback, recent redemptionsIII 3	Flint, Charles R		
History ofIII 3	Labor, intelligence and		91
Hamilton, Alexander, inIII 4	Floods (see relief)		
Ideal system, anIII 3	Florida		
Investment abroad, AmericanIV	Louisiana, part of		272
London statist on AmericanIV	Floriculture		
McCulloch, Hugh, in	Commercial, (L. Thoma		363
Money in U. S	(See also flowers)		-
National, soundIII 3	Flour		
Paper money, filth on	Exports		31
Promoter, work of the	Horse power in mills		
Railroad earnings increaseIII 4	Milling on agriculture,		
Stocks, who ownsIII 3	of		44
Railroads ofIV 223	Minneapolis exports	III	363
Rothschilds' Hessians	Monopoly and railroads	IV	336
Silver dollars, redemption ofIII 3	(See also commerce)		
In circulationIII 3	Flowers		
In treasuryIII 3	Area in cultivation and		
Speculators and progressIII 3	Capital needed for start	·····V	340
Standard universal 3	Crops, choice of	· · · · · · · · · · · · · · · · · · ·	364
Treasury, inIII 3	Floriculture, commercia	l, (Leroy	
Trust companies, (W. P. Gest)III 4	Thomas)		
United States leads world inIV	Fruits and		
Notes, soundness of theIII 3	Glass roof area		
Wealth of U. S 4	Glass, uses of		366
World finance, AmericanIII 3	Greenhouse, a modern.		
(See also banking, speculation)	Investments in, amoun		
inancial	Statistics of		
Gold, American conservation ofIII 3	Lily and tulip culture.		
inanciers	Nurseries, number of	V	369
Longevity of	Ornamental purposes	V	370
Yire (see relief)	Parks, public		
Alarms (see telegraphs)	Pot, flower, industry.	· · · · · · · · · · · · · · · · · · ·	366
Tenement houses and	Production and profits,	statistics	
Tenement houses andX 1	of	V	364

Flowers—Continued.	Forestry
Cost of	Appalachian bill
Statistics of	Lumber, qualities of American111 355
Profit in cut	Reforesting in N. Y.,III 360
Specializing in	(See also lumber)
	Forrest, Edwin 309
Value of, grown	Fossils, study ofVII 31
Violet culture	Foster, Frank K.,
FluoriteVI 338	Strikes, and the philosophy of
Folk, Joseph W	the strikersVIII 152
As enforcer of lawII 122	Foster, John W
Reign of lawX 307	Hague convention onII 220
Food	Foundries
Cotton seed products	Association founders'VIII 92
Exports of 9	Strikes, inVIII 92
And production V 20-32	France
And productionV 29-32	America, proposed alliance of
Consumers of U. S	1793 withII 159
Future of supplyV 10	Extradition, initiatesII 172
(see also adulteration)	Lawyers inII 100
Food products	Louisiana, colonizer ofII 267
Trusts controlling, statistics of III 163-4	Mexico, designs of, onII 177
U. S. as food shipper	Reciprocity agreement of 1898II 217
Largest producer of	Revolution of, accepted by
West, products ofIII 365	AmericaII 161
(See also adulteration)	Treaties with U. S., earlyII 159
(See also additeration)	Trusts, prohibited inII 354
Foote, gunboatIX 300	U. S. and neutral rightsII 165
Forbes, J. DVII 51	Forbidden to commission officers
Glacial bloory and	inII 162
Ford, Alexander H	Franchises
Triumph of American ideaVII 198	Public, decision of Taney on
Ford, Henry James	Francis, S. W
Civil service reformII 406	Typewriter patents ofVII 366
Ford, Paul Leicester I 366	Typewriter patents of
Foreign policy, American, growth of, .	Frankel, Lee K
(Richard Olney)II 124	OCTIVATE CARGOTTE CAR
Agencies, need of enlargedII 136	
Asiatic empire, United States	Art and
anII 136	"Canada Pamphlet" ofIV 76
Asiatic powers, and	Diplomacy of
Cuba, and, II 127	Electrical works ofVII 109
Europe, unchanged as toII 139	Literature and
Great Britain, alliance withII 142	Medical colleges, assisted VII 407
Island possessions, increase of	On the constitutionII 60
throughII 137	Fraser, John Foster
McKinley, President	Causes of American manufac-
Napoleonic warsII 138	turers' success
Orient, trade withII 140	Fraternities, benevolent
Philippine Islands a handicapII 142	(B. H.Meyer,)
As a naval baseII 135	Age and ratesX 238
Duty of U.S. toII 128	Benefits paid
Purchase of, condemned by R.	Defects ofX 233
OlneyII 131	Dual nature ofX 23:
Not warrantedII 135	Failures of
Primacy of U. S. on American	Law, proposed
continentsII 138	Membership, total
Spanish war on, effect ofII 124	National congress of, nature of X 24'
Check on, in senate	National congress X 23
Isolation, abandonment ofII 126	Number of, and benefactions , X 23:
Evils of	Rates X 23
Inadequate to national	And age, table of
MaturityII 126	Reserve and surplus ofX 23
Diaturity	

Fraternities, benevolent—Continued.	Gannett, Henry	
Uniformity needed	Our industrial position in the	
(See also societies, secret)	worldIII	
Free trade (see tariff)	Gantvoort, Arnold J	
Frelinghuysen-Zavala treatyII 245	MusicI	32
French, Arthur W	Music and national life	
City skyscrapers 1 285	Garber, John H	
French, Richard	American wineV	26
Reaper of	TobaccoV	
Freret, F. G		~ 0 0
Cane sugarV 209	Garfield, James R	1 19
Frick-Carnegie controversyVI 145	Beef industryV	111
Fruits	Garland, HamlinI	368
American figs	Garment workers	
Area, and production V 8	Women in unionVIII	388
Burbank, L. grown byVII 105	GarnetsVI 330,	435
Canning industry, develop-	U. S., inVI	330
ment of	Gas	
Colonies, first grafted tree inV 242	By-products ofVI	390
Transplanting European inV 240	CokeVI	390
Dried, scarcity of, earlyV 243	Consumption of	389
Europe, introduced from	Discovery ofVI	384
Export, development of tradeV 250	Distribution ofVI	
Exports and imports of 1821V 243	EngineVI	
Foreign trade, beginning of V 242	FuelVI	386
Grape and raisin production,	Geology ofVI	381
(George C. Hussman)V 252	Heating power ofVI	389
Grape industry, American V 248	History, earlyVI 380,	38
History, American, early V 236	IlluminantVI	388
Lemons, American	Laughing, (see nitrous oxide)	
Nuts, AmericanV 250	Natural (F. H. Oliphant)VI	380
Olives, American	Occurrence ofVI	38
Orange, American, industry V 246	Output ofVI	38:
Pineapple industryV 247	Pipe lines, firstVI	387
Porto Rican, II 299	Pipes for distributionVI	
Prune industryV 245	Pressure ofVI	389
Raisins, first CaliforniaV 244	Reduction ofVI	
Statistics of, American V 7	Storing and transportation ofVI	
Substitution of domestic for	Uses ofVI	
foreign, (W. A. Taylor)V 236	Waste ofVI	
U. S., indigenous toV 236	(See also petroleum)	00
Vineyards, French, earlyV 242	Gates, John W.	
(See also specific names)	Corners ofIII	201
Fuller, Margaret	Louisville stock, his corner ofIII	
Fuller, Samuel, physicianVII 402	Morgan, J. P., aided byIII	
Fullerton, Hugh S	Plunger, an all aroundIII	
Organization of office workVII 370	Promoter, as aIII	
Furnaces, blast (see iron)	Steel corporation, andIII	
` ~	Geare, Randolph Iltyd	30.
Ú	Historic swordsIX	20
Gadsden purchaseII 285	Gems	30,
Treaty, isthmian canal, effect on II 237		20
Gaillard, Peter 95	(G. F. Kunz)VI	34
Gallatin, Albert	(See also stones, precious)	
Canals and roads, report ofIII 9	Genet, M	10
Galloway, B. T	First French minister to U. SII	10.
Intensive farming	Genius	0
Problems of American botanyV 414	Race superiority andI	6
GalvaniVII 26	Geology	
Gambling	American, earlyVII	4
U. S., common in	Coal distributionVII	5
Dangers of, in cities	FormationsVII	4
(See also speculation)	Fossils in carboniferous ageVII	5

Geology—Continued.	Going, Charles B
Glacial investigation in U. SVII 51	Village communities of factory,
Government, beginnings ofVII 47	machine works, and mineVIII 326
Growth ofVII 16	Gold
Leidy, discoveries ofVII 53	Abandoned fields reworkedVI 219
Marsh and Cope, work ofVII 53	Amalgam methodsVI 210
Progress ofVII 31	And good creditsVI 247
Soils, American, and agricul-	ArizonaVI 216
ture	Belt, the great AmericanVI 220
Society, American of	ColoradoVI 216
U. S. surveyVII 45	CaliforniaVI 218
George, William R., philanthropist X 166	Comstock methods, influence
Georgia	ofVI 208
BattleshipIX 302	Concentration methodsVI 212
Cotton, introduction ofIII 20	Cyanide, introduction of VI 229
Educational system	Dredge miningVI 205
Slave disputes, earlyII 84	Drift miningVI 205
Vs. CrisholmII 63	Effect of, on industryVI 244
Gerhard, W. W., physicianII 414	Electro-cyanide processVI 235
Germs (see bacteriology)	Extraction methodsVI 210
Germany	History, early, in U. SVI 202, 215
Gerry, ElbridgeII 17	Hydraulic method, improvement
Lawyers in	ofVI 204
Policies, contempt of, for Ameri-	Hydraulic placer mining, firstVI 203
canII 207	Inflow of, (E. H. Roberts)VI 242
Principle of representation in	Inflow of, oils industrial machin-
	eryVI 250
200000000000000000000000000000000000000	Importations ofV1 246
Samoan treaty with U. SII 198 Scholarship inVII 91	Klondike crazeVI 215
Scholarship in	Loss of, in old methodsV1 229
Views, of on American industryIV 55	MacArthur and Forrest's process. V1 233
Gest, William P	Methods of securing, variousV1 228
The rise of modern trust com-	Mining of
paniesIII 428	Money
Gibbons vs. Ogden	In various countriesV1 247
Decision inII 69	National creditV1 248
Giddings, Franklin H., sociologistVII 99	Nevada VI 217
Gilman, N. P	OccurrenceV1 228
Profit sharing and co-operation.VIII 302	Panic of 1857VI 244
Girard, Stephen	Per capita in U. S
And the Barings III 408	Potents VI 230
Character ofIII 407	First. V1 230
Death ofIII 410	Drogoss VI 212
In financeIII 407	Described
Loan of 1814III 409 Girls	Farly
Reform schools for	MacArthur & Forrest's VI 230
Glaciers	
Investigation of, in U.SVII 51	Siemens-Halsk
Glucose	Production of various nationsVI 249
Manufacture of	Pumping improvementsVI 209 Quartz mining
Glaciers	Quartz mining
Ramsay's theoryVII 55	ReactionsVI 234
Gladstone, W. E	Descurces of far West, (J. A.
American industryVII 27	Tatcha) VI 210
Constitution, AmericanII 6	Gofety of currency and
Glass	Stocks of the world ¥1 243
Trusts in	
Glidden, Carlos, Myentor	

Gold—Continued.	Government ownership of railroads
World's production in 400 yearsIV 48	(M. A. Knapp)IV 30
(See also finance)	America, early favored inIII 4
Gold and silver	Arguments againstIV 35
Foreign trade in, for 1820-30IV 107	Australia, inIV 36
Gold standard (see finance)	Capital, security ofIV 35
Gompers, Samuel	Discrimination andIV 36:
Growth of American Federation	Effects of, possibleIV 368
of laborVIII 143	Evils curable by IV 35
Limitations of conciliation and	Extension of linesIV 360
arbitrationVIII 104	Germany and
Gonzales	Initiative, might discourageIV 363
Battle of	
	Objection to, politicalIV 350
Goodyear shoe machines	Rates from, lowerIV 350
Gordon, John H	Railroads, of
Binder of	Speculation, would stopIV 358
Goss, Samuel D., surgeonVII 431	Wages andIV 360
Gould, George	Wealth, would equalizeIV 364
Insurance deals ofIII 467	(See also socialism)
Gould, Jay	Grain
StrikesVIII 279	Monopoly and railroadsIV 33
Telegraphs and	Grand Rapids
Government, American	Charity inX 20
Aid to farmersV 27	Grangers
Apportionment of representa-	Railroads andIV 298
tion, shaken by	Grant, Robert, novelist 368
Architecture (see architecture,	Grant, General UlyssesII 153
government),	Campaigns of
Centralization of its powerII 205	Peace utterance of
Commercial opportunity andII 449	Succeeds HalleckIX 19
Commerce andIV 517	Swords of
Constitution, unwritten safe-	
guards ofII 206	(See also war, the civil)
Education, rights of, in	Grant, President Isthmian canal, proposed sur-
England, derived fromII 446	vey of
Good, (Grover Cleveland)	Grapes.
Individual, the and	Bull, E. W., work of
Industry, early American, andIII 10	California, in earlyV 24
Investigation of labor (R. T. Ely)VIII 24	Catawba for wineV 27
Its purpose, (Grover Cleveland)II 4	Chautauquan belt, production inV 25
Judiciary, the power of	Concord vines, planting ofV 25
Labor, andII 446	Culture, early AmericanV 25
Municipal, and democracy,	Diseases of
(E. B. Smith)	Districts in U. S
Opposition a saving feature of II 207	Eastern states, in
Organization ofII 61	Future of industry V 264-
Peace in, drawbacks toII 201	Picking and packing, methods ofV 25
Popular vote, nomination by	Phylloxera evil
(R. M. La Follette)	Prices of
President's power, growth ofII 204	Pruning and grafting methodsV 25
Problems before the nation,	Raisin, production in U. S.,
(Theodore Roosevelt)II 452	(George C. Hussman)
Representative, beginnings of	Soil for
(E. J. James)	Stanford vineyard
Scientific work of, (M. A. Lane)VII 40	Success of industryV 26
State, distinguished from the 81	Varieties grown in U SV 25
Strength ofII 445	Increase in
Whitelaw Reid. on	Virginia, in early
(See also the state)	Wine production in U. S

Graphite	Guard, national—Continued.
(J. Struthers)VI 300-1	Lee, Henry, onIX 136
Amorphous graphiteVI 304	Mexican warIX 138
ArtificialVI 308	Training of, need ofIX 139
Artificial	War of 1812IX 138
Chemistry ofVI 301	Washington on
Demand forVI 303	(See also army, the, and war)
In CeylonVI 305	Gulick Luther H
In EuropeVI 306	American school boy 125
Methods of treatmentVI 304	Gun cotton (see guns)
Occurrence ofVI 301	Guns
Output of, in U. SVI 308	Balloons andIX 391
Principal American mines ofVI 302	Cannon, earlyIX 388
Properties ofVI 301	Explosives used in
TL SV1 302	Flintlock of JeffersonIX 394
Uses ofVI 308, 310	Hyposcope, use of
Graphophone, the	Maxim. H
Inventor of	Peace power of
Gray, ElishaVII 175	Power of, various sizes of 1A 390
Inventor of telephoneVII 137	Rapid fire guns
Gray, George	Rifles used by armies
Progress of international arbi-	Size ofIX 389
trationII 148	Steel used inIX 388
Great Britain	Submarine boats and
Alaska boundary treatyII 151	Velocity of projectileIX 389
Behring Sea fisheries disputeII 92	(See also battleships, navy, the)
Benring Sea hancites dispute.	Gunboats (see navy, the)
Boer war, rejects American	Cumnasia
offer of intervention in	Need of
Committee on grievances of	(go, also education)
	Cyrnoum VI 32
Foreign policy, compared with	(S R Ladd) VI 40
U. S	Coment. V1 41
Neutral rights, U. S. andII 166	Chamistry of
Neutral rights, U. S. and	Composition of
Philippine possession, aid of to U. S., in	Goology of
Treaty of 1897	History early
Trusts inII 356	Occurrence
Venezuela boundary disputeII 182	Diester of ParisVI 41
Great Northern railroad	Uses of
Steamers of, for OrientVII 205	
West, opened theIII 371	Н
Greeley, Horace, editor	Habeas Corpus
Green, Horace	Framed by lawyers
Researches of	Tradler Arthur T
Greenbacks (see currency, finance	Education and religion 26
paper money)	Trusts
Grindstones (see abrasive materials).	Hague, peace conference
Grosscup, Peter S	American contmission
TrustsIII 78	Influence atII 20
Guadaloupe Hidalgo	Czar, the, and
Treaty ofII 226	Foster John W., on
Guard, national	Future of
Adams, J. Q. onIX 129	Holls F. W., on.,
Boughton, D. H. onIX 128	Lawyers' part inII 1
Congressional powerIX 130	Peace conference
Constitutionally provided forIX 128	Ding fund referred to
Inadequacy ofIX 133	President of U. S., power of theII 2
Inadequacy of	Principle of, leadingII 2
Jackson, Andrew onIX 129	Ratification of treatyII 2
Your for first	Submission of cases toII 2
Law of 1903IX 132	
Law 01 1903	

Haines, Jonathan	Havana
Cutter ofV 98	Sanitary reform ofII 30
Harvester ofV 94	Hawaii
Hale, Edward Everett 366	Annexation of
Halle, von	Production in, increasedIV 4
TrustsIII 124	Rights ofII 20
Trusts	Hawkins, T. J.
Halleck, Fitz Greene	
Halleck, H. W., soldier	Reaper of
Hamilton, AlexanderII 52	Hawthorne, Nathaniel 357
Banks, his dislike forIII 403	Hay, John
FinancierIII 402	' As author 36
Soldier	Isthmian canalII 146
Hamilton, Andrew	Monroe doctrineII 148
Zeuger libel suit, defenderII 98	Pacific islands, American policy
Hamilton, Frank HastingsVII 432	inII 140
Hamlin, Alfred D. F	Peace, America's work forII 153
College architecture in U. SI 271	Triumphs of American diplo-
Hammond, W. A., physicianVII 421	macyII 14
Hampden, JohnII 101	Hay-Pauncefote treaty
Taxation, stand of, againstII 99	Hay
Hampton, Celwyn E	Area and productionV
The army since the Spanish	
	Crops, relative value of
warIX 86	ExportsV 3
Hampton, Va	Production
Home for soldiers atIX 426	Hayden, Horace H., dentistVII 43
Hancock, John	Hayes, Rutherford B
Signs declaration of independ- enceII 24	Isthmian canal, asserts American
enceII 24 Hancock, Winfield S	supremacy over
Swords ofIX 400	Health
Handy, Rozelle Purnell	Immigrants, sick, table ofX 12
Geology in U. SVII 47	Physical culture andX 5
Harbors	Health, public
AmericanIV 21	Immigration and, (Allan Mc-
European, deficiencies ofIV 22	Laughlin)IX 11
Harlan, John Marshall (asso. justice,	(See also adulteration)
Supreme court)	Hearst, Mrs. Phoebe
Railroad rates, decision on	Educational gifts of
Harland, Henry, novelist 366	Heat
Harper, William R	Producer of, U. S. largestIV 3
Future of small colleges I 164	Heath, John E
Opportunity I 97	Binder of y 9
Harrington, Francis H	Helena, gunboatIX 30
Marine corpsIX 378	Helmholtz, Hermann von
Harris, Chapin A., dentistVII 438	And the telephoneVII 17
Harris, Joel Chandler 365	Hemp
Harrison, Mrs. Burton	Area and productionV
Harte, Bret	Henderson, Charles Richmond
Harvard university	CharityX
Architecture of	Science in philanthropyX 4
Expansion of I 190	Henry, John C., electricianVII 13
In astronomyVII 64, 70, 76	Henry, Joseph, electricianVII 11
Lawrence scientific schoolVII 300	Meteorology, andVII 1
Harvey, Charles M	Herald, New York 1 37-
The army in Mexican warIX 39	Herbert, Hilary A
The development of the SouthIII 370	Sea power and the navyIX 18
Harvey, H. A	Heredity
Armor plate ofIX 333	Race superiority and 1 4
Hats	Herne, James A 31
Colonial manufacture of	Heron, Matilda

Hewitt. Abram S	Hops	
Tunnel plans of, in 1888 IV 454	Area and production \mathbb{V}	7
Underground railway, proposedIV 454	Hopedale, town ofVIII 3	33
Hewitt, Peter Cooper	Hopkins, Captain J. B	
Biographical sketch ofVII 187	Cruise ofIX 2	റദ
Three electrical inventions ofVII 183		,00
Higgins, Charles.	Horner, Joseph	
	Copying American machineryVII 2	
Trinoitous disconsional in order	Horner, W. P., physicianVII 4	113
2.2.2.0 (1.01.2.0.0)	Horner, William	
Hilkoff, Prince Michael	Researches ofVII 4	120
Railroad manIV 207	TT	
Hill, George William	Horses	. 0.4
Trend of modern agriculture in	Automobiles, andIV 5)U4
U. S V 51	First AmericanV	23
Hill, James J	Horticulture (see flowers)	
Nation's debt to railroadsIV 253	Horsack, David, PhysicianVII 4	11
Railroads profitsIV 354	Hosierv	
Workmen, methods withIII 255	Horse power in mills,VII 2	214
Hirsch, Emil G	Hospitals,	
American university ideals I 197	BritishX	89
	Building of, (Hollis W. Field) X	88
Hirsch, Baron Mauritz deX 61	Dunding Oil (Tronto III and III)	-
rund for sows	CubanII 3 Cost of maintenanceX	35
Hobson, John A	Cost of maintenance	JU
Concentration of industryIII 49	Death rate influenced by num-	89
Hobson, Richmond P., sailorIX 249	ber ofX	
Hodge, H. L., physicianVII 414	History and uses ofX	88
Hoe, Richard M., inventor 370	Preponderance of, in charityX	30
Hoe. Robert	Publicizing ofX	26
Inventions of	Statistics ofX	35
Hogs (see packing and swine)	TuberculosisX	89
Holden, Edward S	United States, inX	89
American astronomyVII 56	(See also charities, insanity,	
Holland, submarine boatIX 302	medicine and surgery)	
Hollis, Ira Nelson	Hotels	
Navy in Spanish warIX 239	(W. A. Washburne) I S	298
Navy in Spanish war	Cost of I 2	299
Holls, F. W		
	Chefs of	300
Hague conferenceII 221	Chefs of I 3	300
Holmes Bayard	Chefs of	30(304
Holmes, BayardVII 423	Chefs of	30(304 299
Holmes, BayardVII 423 Holmes, George K	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I	300 304 299 301
Holmes, Bayard	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I	30(304 299 301 30(
Holmes, Bayard	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I	300 304 299 301 300 303
Holmes, Bayard	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I	300 304 299 301 300 303
Holmes, Bayard	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I	300 304 299 301 300 301 301
Holmes, Bayard	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I	300 304 299 301 300 301 301
Holmes, Bayard	Chefs of .	300 304 301 300 300 300 300 300 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I	300 304 301 300 300 300 300 300 300 300 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I	300 304 299 301 300 300 300 300 300 300 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I	300 304 299 301 300 300 300 300 300 300 300 300 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I Specialization in. I	300 304 299 301 300 300 300 300 300 300 299 299
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I Specialization in. I Steward's work. I	300 304 299 301 300 300 300 300 300 299 299 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I Specialization in. I Steward's work. I	300 304 299 301 300 300 300 300 300 299 299 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I Specialization in. I Steward's work. I Telephones in. I	300 304 298 301 300 300 300 300 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Tood supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I Specialization in. I Steward's work. I Telephones in. I Wine cellars of. I	300 304 298 301 300 300 300 300 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Refrigeration. I Social life and. I Specialization in. I Steward's work. I Telephones in. I Wine cellars of. I Houdon. I	300 304 299 301 300 300 300 300 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties. I Construction of. I Dishwashing. I Food supplies of. I Illumination. I Kitchens. I Laundry of. I Management of. I Power plants of. I Rates of. I Refrigeration. I Social life and. I Specialization in. I Steward's work. I Telephones in. I Wine cellars of. I Houdon. American sculpture, in. I	300 304 299 301 300 300 300 300 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America	Chefs of	300 304 299 301 300 300 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America. VII 423	Chefs of	300 304 299 301 300 300 300 300 299 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America	Chefs of	300 304 299 301 300 300 300 300 299 300 300 299 300 300 300 300 300 300 300 300 300 3
Holmes, Bayard. Surgery in America	Chefs of	300 304 299 301 300 300 300 300 300 300 300 300 300
Holmes, Bayard. Surgery in America	Chefs of. I Clerk's duties I Construction of I Construction	300 304 299 301 300 300 300 300 300 300 300 300 300
Holmes, Bayard. Surgery in America	Chefs of	300 304 299 301 300 300 300 300 300 300 300 300 300

Houston, Sam	Illinois Central railroad
In early Texas	Ownership ofIII 332
SoldierIX 41	PlannedIII 27
Howe, Elias, Jr	And labor, (J. R. Commons)VIII 236
Inventor of sewing machineVIJ 343	Canada, smuggled throughX 124
Howe, J. I	Character of immigrants II 439
Inventions ofVII 329	Character ofVIII 243
Howells, William D I 362	Charity andX
Huebner, Solomon	Dangers from physically inferior X 125
Who owns the railroadsIII 330	Discrimination in, dangers of X 125
Hugenots	German I 40
In U. S 16	Increase since 1861III 372
Hughes, R. E	Inspection for diseasedX 121
The public school system 95	Irish, causes of I 39
Hull, Isaac	Italian I 42, 439
Career of	Cause of I 44
Naval officerIX 35	JewishX 60
Hull, William	Negroes, white, vsVIII 405
War of 1812 and	Number of
Hunt, Walter	Paupers excludedX 136 Peasants a distinct raceI 8
Inventer of sewing machineVII 342	Policy on, American
Huntington, C. P	Population decline of and X 213
Education I 240	Problems of (F. P. Sargent)II 437
Hurricanes (see weather)	Prosperity, and
Hussman, George C	Public health and, (Allan Mc-
Grape and raisin production in	Laughlin)X 119
the U. S	Races, improves 51
Hussey	Relief of
Mower, of	Religion and I 18
Hussey and McCormick, Cyrus H, Inventions of	Scandinavian 41
Hussey, Obed,	SettlementsX 152
Inventions and patents ofV 80	Sick immigrants, table ofX 120
Hutchins, George A	Standards for admissableX 126
Development of railway carsIV 390	Statistics of from 1726 to 1903II 438
Hyde, Charles Cheney	Stature and
Agreements other than treatiesII 216	Taxation and
Hyde, James Hazen	withX 123
Insurance schemes of	Tuberculosis and X 123
Hyposcope, the, (see guns)	(See also trades unions, labor)
	Imperialism
I	Constitution, island possessions
^	and II 203
Iberville, Pierre de	Philippine war protracted by
Mississippi river, visits 268	anti-imperialismII 200
Ice	Richard Olney, onII 130
Geological formation of	Imports and exports
Ichthyology	Agricultural, imports, value of V 1
World's debt toVII 33	AutomobilesIV 50
Idaho	Imports, decrease of, in 1820IV 9
OrganizedII 286	Increase of
Territory of formed	Increase of, under early tariffII 31
Thering "Struggle for Law" II 103	New Orleans, early III 10
"Struggle for Law" II 103	South AmericanIV
Factory laws ofVIII 52	WatchesVII 36: Independence, American
Union label lawVIII 195	New York, approved by II 2
Illinois, (battleship)IX 301	Vote of New York, New Jersey,
Illinois trust and savings bank	Pennsylvania, Maryland, Dela-
Largest companyIII 438	ware, and South Carolina, on II 1

Independence, Day, really July 2 II 19	Industry—Continued.
Independence, Declaration ofII 14	Canals and railroads in west,
John Adams, onII 16	early111 27
Mecklenburg declaration ofII 15	Development of early American. III 25
India	Capital available, early foreignIII 31
Caste system of	Early demands for capital
Custo By Boomi Ozara i i i i i i i i i i i i i i i i i i	in WestIII 23
Cotton exportsV 141	Early eastern, inIII 25
Grower, asV 140	Early invitations to foreignIII 32
Suez canal, trade of, and	In II S. early supply ofIII 29
Indians	
Agriculture, andV 18	Capitalists must ruleIII 317
Indiana, U. SIX 298	Captains ofIII 244
Individual. the, government and II 447	Captains of, and his lieutenants,
The, society and	(W. R. Lawson)III 244
Indo-Germanic race	Carnegie, Andrew
Indurite (see guns)	Encouragement of young men
Industrial commissionIII 105	byIII 278
Arbitration and strikes, on VIII 36	Forecast of futureIII 281
Al Divigoron and Strategy	Organization of manufactur-
Congress, on powers of VIII 81	ing industriesIII 273
Employees, on protection toVIII 40	Reward policyIII 274
Experts employed byVIII 26	Reward policy
General conditions, onVIII 33	Success, causes ofIII 276
Injunctions, on	Works, employees' share inIII 280
Labor unions, onVIII 34	Character of American
Profits, onVIII 29	Cities, growth of, in city
Recommendations of,VIII 42, 84	Code, model, for citizensIII 312
Report ofVIII 25, 27	Colonization, conditions of suc-
Sweat shopsVIII 31	cess inIII 13
Translaved the on VIII 32	Commerce, early interstateIII 21
	Commission, the industrialIII 105
vy ages, on	Concentration of, (J.A. Hobson) . III 49
(See also factories, trusts)	Conduct, freedom ofIII 312
Industry	Contract, the day ofIII 277
American captains of, (W. R.	Contract, the day of
Lawson)	Freedom ofIII 315
America historically favored111 304	Corporate factors in American
American, ideas, bigness ofIII 250	progress, (W. R. Lawson)III 377
Causes of American manufac-	Corporations, early businessIII 36
turers' success, (J. F. Fraser) III 283	Small stock for early
Methods copiedVII 206	Cotton, introduction of, into
Supremacy admittedIII 309	Carolina and GeorgiaIII 20
Supremacy admitted III 297	Debt, and national, after 1812III 30
Vim	Department stores
Americans a composite raceIII 288	Development, need ofIII 311
To, devotion ofIII 287	Distribution, wide, neededIII 348
Anarchy, remedies for III 318	Employer, rights of theIII 315
Arbitration, compulsoryIII 321	Employer, fights of the Employers, struggle of American III 256
Compulsory, antagonistic to	Employers, struggle of American
business	Economy of production, Ameri-
Limits of	can
Bank of North America char-	Education, American and Euro-
teredIII 35	peanIII 305
Bank of U. S. chartered	American freeIII 305
Banks, state the, and	Best, method of, for
Banks, state the, and	
Boss, American laborIII 250	Engineering
English laborIII 251	French policy ofIII 306
Qualifications of the	History and
Qualifications of theIII 255 Brains, American demand forIII 298	National differences in III 308
Defficient and American employer	National differences m
and workman	Secondary importance of, inIII 307
British and American inventionIII 290 British excellence in goodsIII 296	Electric power, cheapness ofIII 349
Business principles in the con-	
and of industry (K. H.	Distribution, economy of
Thurston)III 311	(Louis Bell)III 345
THUISOUL)	

dustry—Continued.	Industry—Continued.	
Engineering in industrial works,	Nationalities in AmericanIII	
(W. D. Ennis)III 257	Oil, consolidation ofIII	72
Fundamental concept ofIII 259	Order, need of, in all depart-	
Speed of, in U. S. and England. III 248	mentsIII	
Engineers, and consolidation of	Organizers, American, due toIII	
capitalIII 258	Character of AmericanIII	246
As managersIII 257	Our industrial position in the	
England, early dependence onIII 34	world, (Henry Gannett)III	1
Glory goneIII 285	Paris exposition, industrial edu-	
Espionage, American system of III 253	cation atIII	306
Foreign relations, early in-	Patent office, superiority of	
crease ofIII 34	AmericanIII	290
Foundry scene, a typicalIII 264	Pennsylvania, settlement of	
French-American schoolIII 309	westernIII	12
Furnace, forge and shop, (Day	Pioneers of American, (G. S.	
Allan Willey)III 264	Callender)III	8
Future of integration of	Policies, early AmericanIII	9
German view of AmericanIV 55	Political supremacy, American	
Girls employed in AmericanIII 295	andIII	302
Gladstone on AmericanVII 271	Production, general, increasedIII	301
Government control favored,	IndividualIII	312
earlyIII 43	Promoter, work of, in, (E. S.	
Government, and early Ameri-	Meade)III	231
canIII 10	Railroads backward in consolida-	
Growth, early, of insuranceIII 35	tionIII	74
Hereditary class, noIII 308	Development of early American. III	26
Independence, national, inIII 311	Planned, early westernIII	27
Individual citizenship andIII 319	Republic, dangers of theIII	310
Industrial future of U.S., (F. A.	Rights, legal and moralIII	
Vanderlip)III 475	Rolling mill, drama of theIII	
Integration of, (W. F. Willough-	Rosebery, Lord, on AmericanIV	54
by)	School, American supremacy	
Three phases ofIII 64	and the publicIII	303
Intelligence, dependent onIII 305	Schools, French commercialIII 3	
Iron and steel, uncertainty ofIII 279	Servants, good, in American III	
Kentucky, settlement of III 12	Share in, of capital, superintend-	
Labor organizations, future of III 326	ence and laborIII	93
Part of, inIII 94	Shirking preventedIII	
American, unskilledIII 250	Shoes, British and AmericanIII	
Laborers and landIII 288	Social improvement, importance	
Leaders, American, hard workersIII 247	ofIII	346
Legislative remediesIII 319	Social remediesIII	320
Locomotives, British and Ameri-	South, post-bellum growth of	00
canIII 296	inIII	372
London Spectator on Ameri-	Speculation in, earlyIII	39
canIV 54	State aid after civil warIII	41
Times on AmericanIV 53	Steel consolidation, history ofIII	65
Lumber, AmericanIII 383	(See also production)	
Machinery, American advantage	Steel corporation and integra-	
inIII 294	tionIII	64
Replacing new with newerIII 297	Steel trust and Carnegie com-	01
Manager, typical AmericanIII 245	panyIII	69
Manufacture as an engineering	Expansion ofIII	69
propositionIII 259	Future of III	71
Manufacturers, boldness of Amer-	Last phase of III	68
icanIII 288	Schwab on the III	68
American, the first generation. III 286	Strike, coal, of 1902, general	00
Evils of the second generation. III 286	demoralization following III	222
Moral rights inIII 312		
Mulhall on AmericanVII 271	Losses in 1902III	915
Napoleonic wars, and AmericanIII 29	Strikes accomplish nothingIII	
- aportonic wars, and American,	And treasonIII	324

Industry—Continued.	Ingalls building
As warIII 316	Structure of
Compulsion not bargainingIII 314	Ingram, F. F.
Education a remedy forIII 318	How labor unions benefit the
Effects ofIII 317	workingmanVIII 172
Lawless	InjunctionsVIII 39
Should be suppressedIII 317	Insanity
Subsidies, early AmericanIII 40	Care of insane
Success, American brains secret	Gartlock hospitalX 110
ofIII 309	German methods of treatingX 108
Depends on reward of laborIII 275	History of, earlyX 104
Systems, example of American	Hospitals for, ideal
and EnglishIII 249	Kalamazoo hospitalX 115
Tariff lowers quality of goodsIII 289	Methods
Tobacco, consolidation ofIII 72	Michigan hospitalX 112
Tradition, freedom fromIII 304	Psychopathic schoolX 117
Training in public schoolsIII 307	Provision for the insane, (W. M.
Traitors, and publicIII 319	Edwards)
Transportation companies, earlyIII 36	Public spirit and
American, early III 8 Integration of III 71	State asylums, evils of
Trusts and invention, economy	Treatment of
the motive of	Woodilie hospitalX 109
Twentieth century, struggle of	Institutes, farmers'
theIII 302-3	(See farmers and agriculture)
Typical American establishment. III 251	Insurance
Union labor principles, soundIII 327	Banking andIII 453
Ultimate form ofIII 328	CompulsoryX 14
Unions, legal incorporation ofIII 328	Death, chances ofIII 454
University, and theIII 319	Fraternal, in U. S., (B. H.
Virginia, settlement of westernIII 12	Meyer)
Vosberg-Rekow, Dr., on America. IV 58	Fraternal, table of ages, rates,
Wages lower, AmericanIII 288	and deaths
High, in AmericaIII 252	
Investing, in	In practice, (O. J. Arnold)III 452 Investigation, (Gilbert E. Roe). III 459
Variety in AmericanIII 289 Water power in fallsIII 348	Of 1877III 467
In New EnglandIII 349	Laws regulatingIII 470
West, cotton in early	Legal expenses of companiesIII 463
Effect of, opening ofIII 22	Insurance, life
First opening of theIII 11	Mutual Life CoIII 461
Growth of the early	Policies, kinds of lifeIII 455
Influence of slavery onIII 19	Policy-holder's profits
Steamboating in early	Proxy jugglingIII 472
The, in 1812	Reserve of companiesIII 458
Western commerce and, (L. M.	Sources of incomeIII 457
Shaw)III 363	SurplusIII 464
Workers, energy of AmericanIII 251	Uses of
Workmen, good, rewardedIII 254	Interstate commerce (see commerce,
Workman, independence of	interstate)
American III 294 Temperance ofIII 252	Invention, American
Workers, requirements inIII 252	BicyclesVII 8
Youth favored in AmericaIII 298	Capitalization, andVII 276
(See also trade, commerce, ship-	Electrical
building, tariff, agriculture,	Machinery, agriculturalVII 7
manufactures, and invention).	PhotographyVII 10
Inebriety (see drunkenness)	Rails, steelVII 30
Ingalls, Melville E	Telephone and graphophoneVII 9
Past, present and future of	ToolsVII 8
American railwaysIV 217	(See also industry)

Invention and inventors	Iron—Continued.	
United States leader inIV 36-7	Connellsville districtVI	96
Invention	Consolidations of capital inVI	
As a factor of American national	Cyclops plantVI	
	Danger, future, from EuropeVI	
wealth, (W. C. Dodge)VII 267	Demand on mining methods,	
Bessemer processVII 29	_	8
British and AmericanIII 291	effect ofVI	
Edison on, of incandescent lamp. VII 194	Deposits, Appalachian chainVI	72
Electric lightVII 154	Delaware and Virginia VI	71
Encouraged in U. SVII 204	Duration of superiorVI	99
Machinery and lightVII 199	Non-AmericanVI	100
Oliver Evans' engineIV 235	Ohio and KentuckyVI	72
Patents, AmericanVII 277	Port HenryVI	68
Sewing machineVII 339	Value ofVI	7:
Telephone, (A. G. Bell)VII 171	Duquesne plantVI	88
TelephonesVII 137	England's priorityVI	
Triumph of the American idea,	English idealsVI	
(A. H. Ford)VII 198	Power, decline ofVI	
TypewritersVII 365	European trade, future ofVI	
Turbine enginesVII 254	German competitionVI	
Wages, andVII 275	Growth of industry in U. SVI	
WatchesVII 351	Of trade, eras ofVI	114
Wealth, cause of AmericanVII 269	Of U. S. steel trade,	
(See also boots and shoes, com-	Cause ofVI	116
pressed air, electricity, tele-	Homestead worksVI	
graphs, agricultural machinery,	Impulses in U. S., firstVI	
science)	Industry, foundations of Ameri-	100
	can (A. Brown)VI	98
Iowa		90
Agiculture, andIII 365	Industry of U. S.,	
Territory of, formed	(F. W. Tausigg)VI	
Ireland	In U.S., beginnings ofVI	
Scotch-Irish, the, and 1 21	Ores and earlyVI	63
Irish, the	John BirkinbineVI	63
Immigration of, causes of	Lake Superior regionVI	81
Girls in factoriesVIII 339	Manufactures, varieties ofVI	132
Iron	Milling and driftingVI	78
American and British steelVI 126	Mills, horse power inVII	214
Competition fearedVI 125	Mining	
American primacy in, (J. F.	Achievements ofVI	84
Crowell)VI 112	Drama ofVI	88
Belgian competitionVI 124	Finance ofVI	86
Bessemer process, ores forVI 98	Methods ofVI	82
InfluenceVI 107	Of blastVI	8
Blast furnace temperaturesVI 88	Steam shovelVI	82
Capacity ofVI 88-9	W. FawcettVI	80
New styleVI 88	MissouriVI	73
Blast furnaces, modern (F. H.	NailsVI	134
Crockard)VI 88	National ideals in iron trade.	
Output ofVI 87-8	(H. J. Skelton)VI	120
Blowing enginesVI 93	New England oresVI	70
Bosh platesVI 92	New MexicoVI	74
Capital miningVI 81	Ore deposits, AlleghenyVI	67
Carnegie mills, scope ofVI 151		
~	(Birmingham, Ala)VI	67
	New YorkVI	69
Charcoal furnacesVI 108	PennsylvaniaVI	70
Coal andVI 108	Distribution and productionVI	66
Fields, PocahontasVI 96	Region, Lake superiorVI	6.
Industry andVI 189	Regions, magnetiteVI	68
Coke, need of goodVI 97	Ores as basis of industryVI	97
Production, growth ofVI 97	Commercial ironVI	62
Colonial manufacture of IV 81	Composition ofVI	62
ColoradoVI 74	MeltingVI	90

n—continued.		from and steel—Continued.	
-	68	Statistics ofIII 162-	
Difference of, in U. SVI	76	Uncertainty of, A. Carnegie on. III 278-	-9
Methods of treatingVI	64	U. S. master inVII 27	73
Quality ofVI	76	(See also foundries)	
	76	Iron clads (see armor plate, monitors,	
In U. S., consumption ofVI	66	and navy, the)	
	63	Ironsides, the New, ironcladIX 32	29
(See also iron)		Irrigation	
	81	(F. H. Newell) V 34	43
	74	ArizonaV 34	
Pittsburg's influenceVI 1	06	Benefits of	52
Pig and steel, production ofVI 1	16	ColoradoV 34	
Pig iron, destiny ofVI 1	31	Columbia river region	
In southern coloniesVI	78		45
Production ofVI 1		History of	14
Plates, iron, destiny ofVI 130, 1		IdahoV 3	
Prices ofVI 1	.03	Interstate character of	
Producers, world's greatestVI 1	14	Lands, classes of irrigableV 3	
Products, miscellaneousVI 1	35	Study of	
Prospect for world's tradeVI 1	01	Use of irrigableV 3	47
Purpose of, (Andrew Carnegie)VI 1	53	Law and funds V 34	
Regions of U. SVI 1	08	MontanaV 3	
Regions of U. S VI	96	New MexicoV 3	
Resources in C. S., natural	73	Oregon, inV 3	
Rocky mountainsVI		Plant life, andV 4	23
SkelpVI 1	274	Problems, principal, of V 3	
South, deposits in	110	Projects, some largeV 3	
in the		Regions to be reclaimedV 3	
Steel hardening metals, (J. H	177	Salvation army, work ofV 3	
Pratt)VI 1	115	UtahV 3	50
Making, effects ofVI	98	West, forest slopes ofV 3	
Ores for		Physical features of	46
StructuralVI 1	100	The, reclamation of (F. H.	
Tariff not vitalVI 1	73	Newell)V 3	43
TexasVI		WyomingV 3	49
Tin plateVI	111	(See also agriculture)	
Trade union influenceVI	107	Irving, Washington	52
Transportation ofVI	100	Lawyers in KnickerbockerII	95
Trust movement andVI 1	112	Island possessions	
United States in tradeVI	116	Production in, AmericanIV	44
In steel market, position ofVI	112	2 1044001011	
Leads in oreVI	127	J	
Steel corporation, (E. S. Meade) VI	197	•	
Supremacy safeVI	120	Jackson, Andrew	
Use of, in city and countryVI	120	At New OrleansIX	36
Uses of, (J. O'Donnell)VI	124	National guardIX 1	
Wire rods, destiny ofVI	125	Tariff, protectiveII 3	319
SpringsVI	73	Jackson Charles T	
WyomingVI	I	Ether andVII 4	127
Youngstown plantVI	89	Toolson Tames	
See also trusts)		Researches of	420
(See also steel corporation,		Jackson, Samuel, physicianVII	414
United States)		Tacoby Henry S	
ron and steel	0 =	American bridge constructionIV	400
Consolidation of, history of	65	Tails	
Exports of	51	Schools for crimeX	256
Foreign demand for AmericanIV	2.1	DOILOUID AVE OFFICE OF THE OFF	
Foreign demand for itimotication	51	(See also crime)	
	91	(See also crime)	
Production, American and	4	Jamaica	386
Production, American and world's comparedIII	4	Jamaica	386
Production, American and		Jamaica	386 2 1

James, Edmund J	Jews—Continued.
Beginnings of representative	Scattering of American
government	Tuberculosis amongX 6
Representation, struggle of, basis	United Hebrew charities, work
ofII 37	ofX 6
Slavery in representationII 48	Vice among X 7
States in representationII 40	Johns Hopkins hospitalVII 41
States III representation in the contract of t	Johnson, Emory R
James, Henry 362	Economic value of isthmian
Jameson, David	
Sword ofIX 398	canalIV 18
Japan	Johnston, Mary 36
Cotton mills of, a menaceII 257	Johnstown.
Foreign trade ofII 256	Military aid in floodX 8
Rail-oads increase trade withIV 265	Red cross at flood 8
Trade with, British and Ameri-	Jolo
canIV 9	United States territoryII 22
Wages and railroads inVIII 412	Jones, John PaulIX 208, 21
Jay, John	Bon Homme Richard and
	SerapisIX 25
200000001	
Jefferson, Joseph	Career of
Jefferson, Thomas, II 13, 14, 20, 21, 52	Not an academy manIX 35
Canals, and 9	Providence, commander of theIX 25
French army commissions, inter-	Serapis, conqueredIX 26
diction ofII 162	Sword captured byIX 39
Republic recognizedII 161	Journalism (see newspapers)
Mecklenburg declaration	Judiciary, American
Neutrality, definesII 163	Powers of
Reason for veto of apportion-	Judiciary
ment bill	Checks to, evils ofII 8
Supreme court appointees, hisII 82	President, independent ofII 9
	Supreme court, proposal to fix
Jenks, Jeremiah W	
Filipino laborVIII 252	majority ofII 8
How congress may control trustsIII 222	Judson, W. V.
Jenney, W. L. B	West Indies strategic valueIX 40
Originator of high buildingsI 289	Justinian
Jesuits	Code of, futility of theII 8
Discovered copper in U. SVI 4	
Jewett, Sara Orne, novelist	
Jews	K
Broadness of, in charity	**
Character of the	Kansas
Charities of, (Lee K. Frankel)X 57	AdmittedIII 37
Extent of	Railroads, helped byIV 210
Charity, problems of	Territory of formed
	Kansas City
Cost of charities ofX 61	Packing centerV 17
DependentX 73	Karch, Charles M
Drunkenness among	Needles and pinsVII 32
Emigrant societies of	Kasson, John A., tariff commis-
Employment for Jewish womenX 67	sionerII 38
Finance inIII 430	Treaties of, criticized
Hirsch fund forX 61	Reciprocity, made by
Immigration of X 60	Katahdin, ramIX 29
Since 1881 X 62	Kearsarge, battleshipIX 30
Indigent X 62	Keller, HelenX 15
Juvenile delinquency of	Kelley, Florence
New York charities	
	Child labor legislationVIII 5
Not paupers	Kelley, J. D. J.
Number of, in New YorkX 57	Our advance in torpedo craftIX 31
Population of New YorkX 71	Recent advance in battleshipsIX 30
Poverty of, in U. S X 60	Kelsey, Carl
Relief societies ofX 68	Negro laborVIII 38

Kentucky	Labor—Continued.
BattleshipIX 300	Closed shop contracts, (W.
Opening ofIII 12	Drew)VIII 215
Ketchum, William F	Commerce andVIII 409
	Commodity, aVIII 359
250.101.021.011.011.011.011.01.01.01.01.01.01.01.0	Compulsory arbitrationVIII 118
Key, Francis Scott 357	Conditions of, changedVIII 246
Kidd, Thomas I	GeneralVIII 28
American workmenVIII 1	Congress, power of, and lawsVIII 81
Kimball, F. A	Co-operation of, and capital,
Introduced lemons	(W. H. Pfahler)VIII 89
Kirby, O. W. A	Debt to railroads, (G. M.
Mower of	Walker)VIII 408
Patents of V 88	Decentralization ofVIII 429
Kirchoff, Charles	Definition ofVIII 153
Mineral resources of U. SVI 1	Demogogy, political, and
Knapp, Martin A	Education, caste, and
Government ownership of rail-	Employers', American, struggleIII 256
	Undue claims ofVIII 108
roads	Factories, (G. W. Alger)VIII 46
Knights of LaborVIII 222	Factory, as a social element,
Organization ofVIII 144	(C. D. Wright)VIII 338
Woman andVIII 384	Factory, machine shop, and
Knowles, HazardV 96	mine, (C. B. Going)VIII 326
KnownothingismX 134	Federation, organization of
Knox, Philander, C.	AmericanVIII 144
Right of congress to control	Of, permanence ofVIII 222
trustsIII 204	Filipinos as laborersVIII 251
KaolinVI 313	Foreigners in, unionsVIII 228
Koren, John	Government andII 440
Benevolent institutionsX 22	Government investigation of,
Kuhn, Adam, American physicianVII 407	(R. T. Ely)VIII 24
KukluxX 134-5	Gould Jay, onVIII 279
Kunz, George F	Grievance of, chronicVIII 428
Precious stonesVI 324	Growth of American federation
KunziteVI 333	of labor, (S. Gompers)VIII 143
Kunzue	Higher education, andVIII 429
	Hopelessness ofVIII 420
L	Immigrant, and machineryVIII 26
	Desirable VIII 24
Labor	Character ofVIII 24
Abraham Lincoln onVIII 175	Immigration and, (J. R. Com-
Ambition inVIII 254	monsVIII 23
American federation ofVIII 25	And productionVIII 241-
Requirements ofIII 252	Impersonality of laborersVIII 31
American underground workers,	ImportedVIII 19
(C. Higgins)VI 15	Industrial commission, experts
Workman, (T. I. Kidd)VIII 1	ofVIII 2
And education, (W. J. Tucker)VIII 426	Report ofVIII 25, 12
And immigration, (John R.	Industry, its part in
Commons)VIII 236	Intelligence, and money, (Charles
Building trades in EnglandVIII 211	R. Flint)
In U. SVIII 213	Knights ofVIII 25, 14
Capital, and, (Grover Cleveland) II 5	And womanVIII 38
Contention of, withVIII 91	Label law, Illinois unionVIII 19
Duties to	Labor law, alien, antiVIII 24
Independent ofVIII 176	Law, (F. J. Stimson)VIII 19
Cheap, not bestVIII 265	Constitutionality ofVIII 8
Child, (Florence Kelley)VIII 56	Growth ofVIII 8
Chinese, character ofVIII 252	Opposition toVIII 8
In U. S	Uniform or gradedVIII 8
Climate andVIII 249	Machine shops, (M. Cokely)VIII 35

Labor—Continued.	Labor—Continued.
Machinery and, (H. White)VIII 365	Wages, cause of high, (A. M.
Manual training in public schools,	Low)VIII 26
(H. E. Back)VIII 418	In U. S., (A. M. Low)VIII 26
Mine workers, (John Mitchell)VIII 346	Of American and European, comparativeIII
Money power, laborers the	Of farmV 10
realIII 95	Of skilled (J. Richards)VIII 27
Monopoly and the struggle of	Premium system ofVIII 29
classes, (G. B. Clark)VIII 127	Woman, present status ofVIII 37
Motive power andVII 212	Woman's place inVIII 37
Motives toVIII 253	
Neglect of workmenVIII 320	Place in organized (S. Yudelson)VIII 37
Negro, (C. Kelsey)VIII 386	Workman, efficiency of Ameri-
Negroes, conditions of VIII 250	canIII
Open shops, (J. R. Commons)VIII 199	Good, rewardedIII 25
And wagesVIII 211	Wrecked labor organizations
ContractsVIII 207	(E. Stewart)VIII 22:
Defined,VIII 201	(See also child labor, civic federa-
History VIII 199, 203	tion, workmen, trades-unions
Policy, (J. R. Commons)VIII 199	factories, industrial commis- sion)
Occupation, choice ofVIII 431	Labor unions
Organizations, future ofIII 326	(F. F. Ingram)VIII 17
UnlawfulIII 325	Check on Wall streetIII 38:
Organized and worked in Amer-	Immigrants andVIII 22
ica, howIII 244	LawfulIII 32
Power ofVIII 91	Legal incorporation ofIII 32
Part of, in industryVIII 90	(See also trades unions)
Population and mileage of vari-	Land grant bill
ous countriesVIII 409	Education, and technicalVII 303
Principles, sound unionIII 327	La Cour, Paul
Problems ofVIII 139	Telephone, inventor ofVII 178
Profit sharingVIII 302	Ladd, Story B
Race and, living standardVIII 256	La Follette, Robert M
Railroad capitalization andVIII 410	Nomination by popular voteII 397
Railroads andVIII 408	Railroad regulationIV 294
Rights of	Lakes, Arthur
Solidarity, causes ofVIII 427	Copper ores in U. SVI 260
Shirking in AmericaIII 253	Lakes
Skilled, (J. Richards)VIII 275	Carson and railroadsIV 280
And wagesVIII 266	Lakes, the great
Proportion ofVIII 243	Advantages of, geographicalIV 148
Specialization of AmericanVIII 243	And war craftIV 142
Strikes, court decisions onVIII 201	Beauty of
Management ofVIII 168	Canals of
Study of, progress inVIII 25	Baker)IV 141
The social engineer, (W. H.	Great Salt, and railroadsIV 279
Tolman)VIII 319	Half century of,IV 142
The law and closed shops, (W.	Lading methods unrivaledIV 146
Drew)VIII 215	Sailors onIV 149
Transportation, and, cost ofVIII 410	Ships built in lake yardsIV 145
Relations of, toVIII 409	Standard oil and III 175
Trusts and cheapIII 100	Steel corporation, and U. SIV 146
Union, ultimate form ofIII 328	Tonnage ofIV 148
Unskilled, degradation ofVIII 432	Trade of
Village communities of factory	AnnualIV 148
and mine, (C. B. Going)VIII 326	Variety ofIV 148
Wage systems, (A. E. Outer-	Lamps, incandescent (see electricity)
bridgeVIII 291	LampblackVI 390

папи	Lawyers—Continued.	
Area of U. S 1	Hampden's, John, stand on	
Cities, platting of, in	taxationII	99
Lane, Michael A	Ihering's struggle for LawII	103
Scientific work of the govern-	Irving's Knickerbocker, andII	95
	John Adams on independenceII	99
mentVII 40	Liberty, lovers ofII	99
The American sociologist of the	Macaulay onII	94
20th centuryVII 91	Maine's Henry, opinion on	01
Lane, Ralph		1.01
Found grapes in Virginia V 236	American securitiesII	101
Langley. S. PVII 42	Mansfield, Lord, and Justice	
	Buller, debt of commerce toII	
Langley, Samuel Pierpont	Moore, Sir ThomasII	95
Work ofVII 4	Napoleon, onII	94
Lard	NecessaryX	307
AdulteratedX 293	New York, New England, and	
(See also packing)	Massachusetts, in earlyII	97
Larned, Charles William	Otis' attack on write of assist-	
West pointIX 167	anceII	99
La Salle	Parasites of societyII	100
Mississippi, visitsII 267	Penn, Wm., in trial ofII	
Latcha, J. A	PestsII	
Gold and other resources of far	Peter the great, onII	94
westVI 215	Popularity, andII	
Leather	Russia, China, France, Ger-	100
Trade statistics ofIII 164	many, England, and America,	1.00
Law, James	inII	
Actinomycosis germ, discoveredVII 421	Shakespeare, andII	93
Law, JohnIII 402	Utopia, inII	95
Law	Venezuela settlement, part of, in II	
Crime in Chicago and Illinois andII 109	Virginia, forbidden fees inII	95
For the people	Webster, Daniel, in Dartmouth	
Industrial rightsIII 311	college case	102
Law, international	Zenger libel suitII	98
German contempt for AmericanII 207	Lee, Henry	
Monroe doctrine, not a part of II 186	National guard, onIX	136
Law	Lee, I. V	
Civic duty, results of, neglect ofII 114	20th century ideas about fighting	
Neglected	shipsIX	281
Obedience to (David J. Brewer)II 108	Lee, Joseph	
Reign of (Joseph W. Folk)X 307	CharitiesX	14
Roosevelt, enforcement ofII 452	Lee, Richard HenryII	14
Lawrence Scientific schoolVII 300	Lee, Robert E	
	Career ofIX	61
Lawson, W. R		0,1
Captain of industry and his	Lead	72 4
lieutenantIII 244	History of, in U. S VI 2 Zinc ore, and, (Hourwich, I. A.) VI	070
Corporate factors in American		
progressIII 377	Reduction ofVI	
Lawyers	Lead, whiteVI	
American life, place of, in	Zinc ores andVI	277
Burkes speech on conciliationII 98	Leadville	
Bury, de, RichardII 93	Discovery and development ofIV	291
Carolinas, harassed in the	Leather workers	
Civilization, an index to	Conditions ofVIII	20
Colonies, leaders in the	Leather (see boots and shoes)	
CorporationX 308	Lebaudy, M	
Dartmouth college caseII 101	College, French-American in-	
Diplomats, American, asII 213	dustrial, founder ofIII	309
GoodX 309	Leclaire, town ofVIII	
Habeas corpus framers ofII 99	Colonies, resolution of, freeing the .II	
	Legislation (see child labor)	-
Hague conference and theII 105	Legislation, factory (see factories)	
Future ofII 107	Legislation, factory (see factories)	

Legislatures	Liquor
Supreme courts, makers of II 82	Ohio, as leading manufacturer
Leidy, Joseph	in
Discoverer of trichinaVII 419	Production, American and
Discoveries of	world's comparedIII
Leiter, Joseph	(See also drunkenness, malt
Wheat deal ofIII 390	liquor, liquor question, tem-
Deals of V 156	perance)
Leland Stanford, Jr., university	Literature, American
Architecture of I 274	(W. S. Walsh)
Lemons	Addison and Steele, influence
AmericanV 247	of I 35
Leo XIII	Bradstreet, Anne, on
Education and I 208	Eighteenth century, early
Leroy-Beaulieu, Pierre	European ancestry of
Railways, AmericanIV 242	Fiction I 36
Railroads, earlyIV 236	Foreign influence, early
Lesseps Ferdinand de	Franklin, Benjamin, on
Panama, andIV 171	Humorist school
(See also Suez and Panama canals)	Irving, Washington, on
L' Estrange, Roger	New England, early
Editor	Nineteenth century, early
Letters	Early in
Writing of, quickVII 370	Sandys, George, on
Lewis and Clark expeditionIV 272	Seventeenth century, in
Libraries	Literature
ArchitectureX 283	Psychological school
Arrangement of public	Live stock
Boston public	American, early
BuildingsX 284	Breeding groundsV 18
Character of, early	Exports
Development of public, (C. A. Cutler)	Farm animals, value ofV 29, 4 Production, American and
Early social	world's compared III
History	Relative value ofV 1
In 1801	Raising and marketing cattle
LibrariansX 283	and sheepV 17
Mercantile, early	ShippingV 18
Public, favoredX 282	Statistics V 17
Special reference	(See also agriculture, beef)
Statistics of a century	Livingstone, Robert R
Town	Debate of, on colonial freedomII 1
Lick observatoryVII 76	Steamboating andIV 15
LifeV 2	Lloyd, James
Light, electric (see electricity)	Supports navyIX 21 Loans (see associations, building
Light	and loan)
U. S. largest producer ofIV 35	Locke, Sylvanus
Lightning (see weather)	Binder of 9
Lincoln, Abraham	Lockouts (see strikes)
Character of, moral 1 243	Locomotives
Civil service reform, andII 413	American, (J. H. Converse)IV 38
LaborVIII 175	AbroadIV 20
StrikesVIII 155	Development of
Taney, compared with	Type of earlyIV 38
Lindsey, S. A	Why Europe wantsIV 38
Patents ofV 88	Baldwin works organizedIV 38
Decline ofV 137	British and AmericanIII 29 Foreign and American, differ-
LintoniteVI 334	ence betweenIV 38

Locomotives—Continued.	Lowell, Mass	
Foreign, in U. SIV 388	Early factories inVIII 33	39
Trade inIV 385	Luce, Admiral	
Hauling power ofIV 208	Founder of war collegeIX 36	69
History of, in U. S., earlyIV 384	Ludlow, town ofVIII 33	
Load, weight ofIV 387	Lumber	
Manufacture, methods ofIV 388	American, (B. E. Fernow)III 33	
Peter Cooper, first in U. S.,	The bestIII 33	
built byIV 384	Chicago market greatestIII 36	61
Production, methods ofVII 208	Civilization, in the van ofIII 3	58
Second in U. SIV 384	Cutting, annualIII 35	59
	Early waste inIII 30	61
Speed ofIV 386		
And steel railsIV 387	Distribution, geographicalIII 30	
Tariffs, foreign, onIV 388	German, American and	
Weight ofIV 387	Hard wood, southernIII 30	
Works, list of present	History, early AmericanIII 38	58
(See also mining)	Labor and wagesIII 38	58
Locomotive engineers	Michigan, Wisconsin, and Minne-	
	sotaIII 30	67
Brotherhood of, organizedVIII 144	No therest development of III 2	50
Lodge, Henry Cabot	Northwest, development of III 3	
Races in U. S 14		64
Lofft, Capel	Panama canal, and III 3	62
Reaping machine ofV 73	Pineries, southern III 30	61
Logan, John, inventorVII 358	Qualities of good III 3	56
	Quantity used in U. S III 3	57
Long, Clifford W	Railroads, growth of, andIII 3.	
Ether, discoverer ofVII 414		
First usedVII 415	Reforesting, need ofIII 3	00
Longevity	Reforestry, N. Y. andIII 3	60
Financiers'III 405	St. Louis hard, marketIII 3	61
Longfellow, Henry W 359	Trust, statistics ofIII 1	64
Longworth, Nicholas, wine growerV 270	Variety of AmericanIII 3.	56
Long wordin, Interioras, white grower	777	22
Taranta Banaia B	Value of industry	OU
Loomis, Francis B	Value of, industry	00
Loomis, Francis B	(See also forestry)	00
Loomis, Francis B	(See also forestry) (See also wood)	.00
Loomis, Francis B	(See also forestry) (See also wood) Lyddite (see guns)	.00
Loomis, Francis B	(See also forestry)	
Loomis, Francis B	(See also forestry)	
Loomis, Francis B	(See also forestry) (See also wood) Lyddite (see guns)	
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louis XIV	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1	
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louis XIV. Louisiana, colonizesII 268 Louisiana. Americans granted shipping privilegesII 270 Anglo-French treaty 1763II 268	(See also forestry)	
Loomis, Francis B	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1	
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louis XIV. Louisiana, colonizes	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1	34
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louisiana, colonizes	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cvanide process VI 2	34
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louisiana, colonizes	(See also forestry). (See also wood). Lyddite (see guns). Lynchings. Races and X 1 M MacArthur and Forrest. Cyanide process VI 2 McBurney, C., surgeon VII 4	34
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louisiana, colonizes	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G.	34
Loomis, Francis B	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G.	34
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G Researches of VII 4	34
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McCellan, George B., soldier IX	34 233 35
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry). (See also wood). Lyddite (see guns). Lynchings. Races and	34 233 335 421 9
Loomis, Francis B. Monroe doctrine, influence ofII 175 Louis XIV. Louisiana, colonizesII 268 Louisiana. Americans granted shipping privilegesII 270 Anglo-French treaty 1763II 268 Area and present population of purchase territoryII 275 Battleship	(See also forestry). (See also wood). Lyddite (see guns). Lynchings. Races and.	34 233 435 421 9
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick, L. J. V	34 233 335 421 9
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X M MacArthur and Forrest Cyanide process VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus. Inventions and patents of V McCormick, L. J. McCormick, L. J. V McCormick and Hussey	34 233 35 421 9
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick, L. J V McCormick and Hussey Inventions of V	34 233 435 421 9
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 270 Political divisions of, successive II 270 Production, present, of purchase territory II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 275 Spain, ceded to II 269 Statistics of purchase land II 275 United States, purchased by II 270	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill	34 233 335 421 9 80 92 76
Loomis, Francis B	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill	34 233 335 421 9 80 92 76
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 272 Purchase of, terms of II 272 Spain, ceded to II 272 Spain, ceded to II 272 Spain, ceded to II 275 Louisville, Cincinnati, & Charleston / railroad, planned III 26	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3	34 233 335 421 9 80 92 76
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 272 Spain, ceded to II 272 Spain, ceded to II 275 United States, purchased by II 270 Louisville, Cincinnati, & Charleston railroad, planned III 26 Low, A. Maurice III 26	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X1 M MacArthur and Forrest Cyanide process VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick, L. J. V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McChiloch, Hugh	34 233 35 421 9 80 92 76
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 270 Political divisions of, successive II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 275 Spain, ceded to II 275 Spain, ceded to II 275 Louisville, Cincinnati, & Charleston railroad, planned III 26 Low, A. Maurice. Protection in United States II 312	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick, L. J V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4	34 233 35 421 9 80 92 76
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 272 Spain, ceded to II 272 Louisville, Cincinnati, & Charleston / railroad, planned III 26 Low, A. Maurice Protection in United States II 312 Wages, cause of high VIII 262	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCulloch vs. Marvland III	34 233 35 121 9 80 92 76 367 105 67
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 270 Political divisions of, successive II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 275 Spain, ceded to II 275 Spain, ceded to II 275 Louisville, Cincinnati, & Charleston railroad, planned III 26 Low, A. Maurice. Protection in United States II 312	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCulloch vs. Maryland III McCulloch vs. Maryland III McCullough, John I 3	34 233 35 121 9 80 92 76 367 105 67
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 272 Spain, ceded to II 275 Louisville, Cincinnati, & Charleston / railroad, planned III 26 Low, A. Maurice Protection in United States II 312 Wages, cause of high VIII 262 In U. S VIII 262	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest. Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus. Inventions and patents of V McCormick, L. J V McCormick, Mcdill. American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCulloch vs. Maryland II McCullough, John I 3 McDevitt, P	34 233 35 121 9 80 92 76 367 405 67 315
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 272 Production, present, of purchase territory II 272 Spain, ceded to II 272 Spain, ceded to II 272 Spain, ceded to II 275 United States, purchased by II 275 Louisville, Cincinnati, & Charleston railroad, planned III 26 Low, A. Maurice. Protection in United States II 312 Wages, cause of high VIII 262 Low, Seth VIII 262	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X 1 M MacArthur and Forrest. Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus. Inventions and patents of V McCormick, L. J V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCulloch Vs. Maryland II McCullough, John I 3 McCullough, John I 3 McCulevit, P. Sword of IX 4	34 233 35 121 9 80 92 76 367 405 67 315
Loomis, Francis B. Monroe doctrine, influence of	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCullough, John I 3 McDevitt, P. Sword of IV 12 McCormick IV 4 McCormick III 4 McCullough, John I 3 McDevitt, P. Sword of IV 14 McDonald John B	34 233 335 121 9 80 92 76 367 405 67 315
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 272 Spain, ceded to II 272 Louisville, Cincinnati, & Charleston railroad, planned III 26 Low, A. Maurice Protection in United States II 312 Wages, cause of high VIII 262 Low, Seth VIII 262 Low, Seth VIII 110	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X1 M MacArthur and Forest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCullough, John I 3 McDevitt, P. Sword of IX 4 McDonald, John B. Genius of, and N. Y. subway IV 4	34 233 35 421 9 80 92 76 367 405 67 315 401
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 272 Spain, ceded to II 272 Louisville, Cincinnati, & Charleston / railroad, planned III 26 Low, A. Maurice. Protection in United States II 312 Wages, cause of high VIII 262 Low, Seth Arbitration, is compulsory, practicable? VIII 110 Lowell, James Russell I 360	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X1 M MacArthur and Forest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCullough, John I 3 McDevitt, P. Sword of IX 4 McDonald, John B. Genius of, and N. Y. subway IV 4	34 233 35 421 9 80 92 76 367 405 67 315 401
Loomis, Francis B. Monroe doctrine, influence of II 175 Louis XIV. Louisiana, colonizes II 268 Louisiana. Americans granted shipping privileges II 270 Anglo-French treaty 1763 II 268 Area and present population of purchase territory II 275 Battleship IX 303 Colonized II 268 France by Spain, ceded to II 270 Political divisions of, successive II 272 Production, present, of purchase territory II 275 Purchase of, terms of II 272 Spain, ceded to II 272 Louisville, Cincinnati, & Charleston railroad, planned III 26 Low, A. Maurice Protection in United States II 312 Wages, cause of high VIII 262 Low, Seth VIII 262 Low, Seth VIII 110	(See also forestry) (See also wood) Lyddite (see guns) Lynchings Races and X1 M MacArthur and Forrest Cyanide process VI 2 McBurney, C., surgeon VII 4 MacCallum, W. G. Researches of VII 4 McClellan, George B., soldier IX McCormick, Cyrus Inventions and patents of V McCormick and Hussey Inventions of V McCormick, Medill American newspapers I 3 McCulloch, Hugh Finance, in III 4 McCullough, John I 3 McDevitt, P. Sword of IV 12 McCormick IV 4 McCormick III 4 McCullough, John I 3 McDevitt, P. Sword of IV 14 McDonald John B	34 233 35 421 9 80 92 76 367 405 67 315 401

McDowell, Dr., surgeonVII 429-30	Machinery—Continued.
McGee, W. J	Economic effects ofVIII 367
Fifty years of American scienceVII 1	Europe, American plants in IV 116
Mackay, John	Evils ofVIII 373
Comstock lode and VI 26	Gas engine, natural VI 391
Macomb, Alexander, soldier 1X 6	Karl Marx, onVIII 368
McKay sewing machineVII 322	Labor saver, asVIII 365
McKinley, President	Useful and useless, and VIII 366
Foreign policy ofII 145	
Peace, favored by	Machinists improved byVIII 361
Philippine policy of	Metal working in, (E. H. San-
Porto Rican policy of, chal-	born VI 283
lenged	Development of metal working
Reciprocity, on II 375	in, (E. H. Sanborn) VI 283
Tariff, earlyII 320	Mining VI 30
(See also tariff)	New with newer, replacing III 297
McLaughlin, Allan	Painful effects ofVIII 372
Immigration and public health .IX 119	Production and VIII 371, 272
McPherson, James B	Quantity of, in U. S. and abroad. VII 200
Sword ofIX 400	Sewing machinesVII 339
Machias, gun boatIX 297	Trades unions andVIII 368
Machine shops	Trusts, help to III 51
Conditions ofVIII 357	Typesetters andVIII 369
Energy of workers inVIII 357	Wear of, rapidVIII 295
Machinery, elevated byVIII 361	(See also agricultural machinery,
Uniformity-non of work in VIII 362	agriculture, mining, boots and
Waste inVIII 363	shoes, cotton machinery)
Machinery	Machinists
Advantages material, ofVIII 373	Character of AmericanVIII 243
Air, compressedVII 247	NavalIX 347
Machinery, American	Unions of, wreckedVIII 222
AbroadVII 201 American colonies, andVII 201	(See also machine shops)
Britain, inVII 261	Magna Charta
British cities, andVII 262	Magnetism (see physics)
CalculatingVII 373	Maine, Sir Henry
Chicago drainage canal, andVII 204	Securities, opinion of, on Ameri-
Cog wheelsVII 263	can
Copying of, (Joseph Horner)VII 260	Maine
Cutting tools, rotaryVII 264	Shipbuilding, and early IV 101
EncouragedVII 205	U. S
Engineers, American, abroadVII 202	Maison Leclaire, theVIII 311
Evolution of reaping, (M. F.	Malt liquors
Miller)	Ohio, as leading manufacturer
Foreign discouragement, earlyVII 269	in IV 101
Expositions, atVII 207	Maltha VI 398-9
Injury, preventsVIII 295	Manchuria
Light, desiredVII 199	Machinery, American, inVII 202
Office workVII 371	Manny, John H
Paris, exposition, atVII 261-2	Patents of 87
Population, andVII 277	Mansfield, Lord
Russia, andVII 202	Commerce to, debt of
St. Petersburg air brake plantVII 206	Manual training, (see education,
Silk, andVII 203	technical)
Turbine engines, (C. C. Fitz-	Manufactures
morrisVII 254	American, (Dr. Vosberg-Rekow) IV 58
Workmen, andVIII 2	American and world's, compared. III 4
Machinery	America's greatness in IV 2
And labor, (Henry White)VIII 365	Artisan, efficiency of Ameri-
Building trades andVIII 370	can III 5
Child labor exploited byVIII 373	Capital invested in III 103
Cotton (D. C. Roper)V 129	Chinese mills

anuractures—Continued.	1	Marine merchant—Continued.	
Colonial, British encourage-		Competition with foreign sub-	
ment of IV	82	sidizerIV	12
70 1	75	Earnings in 1820IV	10
TO 1 1 10 -	75	Increase of	10
Consumption, homeIV	2		
CottonIV 6, V 1		Restrictions of American	9.
979a -	62	Seas, freedom of, established by	
	- 1	U. SII	168
	97	Sea power of U.S. (H. A.	
2	16	Herbert)IX	
	1	Tonnage, American 1861-1901IV	13:
Exports of, for 1904IV 1	12	U. S. a maritime nationIX	180
Foreign discouragement of		Marion, Ind	
American	70	Home for soldiers atIX	42
Hats, colonial, ofIV	79	Mark Twain (see Clemens, Samuel C.)	
Iron, colonial, ofIV	81	Marriage	
Of, in the South	74	Drunkeness andX	183
70	78	Marsh, C. W	
Japan, mills of, a menaceII 2		Binder ofV	O)
75.	83	Marsh, Edward A	51
New Jersey, early, of			250
		Watches andVII	330
Ohio, early, in		Marsh, O. C.	pv ,
Plants, distribution of		Discoveries of VII	53
In 1820, distribution ofIV 18	00	Marsh, W. W.	0.6
Population, proportion of Ameri-	~	Binder ofV	90
can, toIII Power employed in American,	5	Marshall, John	70
	10	Career of, end of	68
(E. H. Sanborn)VII 2 Retaliation, beginning of Ameri-	10	Constitution, on meaning ofII	
	98	Gibbons vs. Ogden, decision onII	69
Rhode Island, early, ofIV		History, opinions of, in American. II	8
Revolution, during theVII 2		Mc Culloch vs. Maryland	Ot
Sewing machinesVII 3		Opinion onII 77	81
Success of American, (J. F.	39	President, on duties ofII	6
Fraser)III 28	63	Macaulay, Lord	01
Thirty years increase inII 3		Lawyers, onII	94
Trade, early American and for-	02	Martin, Thomas Commerford	0.
	99	Electricity in miningVI	37
TypewritersVII 30		Martinique	01
	35	Disaster ofX	8
	17	Marx, Karl	
Watches VII 3		MachineryVIII	368
	17	Maryland	
Increase of, in		CruiserIX	302
(See also trusts, industry, pro-		McCulloch vsII	
duction, ship building and com-		Vote of, on American in-	
merce)		dependenceII	13
(See also power, motive)		Masons, free	
anufacturers (see industry)		Nature of masonryX	252
arcy, E. E		Power of	51-2
Nitrous oxide applied to surgery.VII 4:	15	Massachusetts	
arcy, H. O		American literature in earlyI	351
SurgeonVII 43	32	BattleshipIX	298
arietta, cruiserIX 30	01	Matthews, Brander	368
arine		Maxey, Edwin	
Corps, (F. H. Harrington)IX 33	78	Porto Rico, American work inII	
(See also navy)		Maxim, HiramIX	
arine, merchant		Americans, employVII	206
British navy, early American,		Maximite (see guns)	
	69	Mayo, Frank, playerI	316

M

Meade, Edward Sherwood	Medicines, patent
Promoter, on the work of theIII 231	Poisons, as X 296
U. S. steel corporation, on	(See also adulteration)
genesis ofVI 137	Melinite (see guns)
Mecklenburg	Melville, George W
Declaration of independence byII 15	Naval engineersIX 341
Mecklenburg declaration	Melville, Herman
Thomas Jefferson on	Author 356
Medicine and surgery	Men-of-war (see navy, the)
American Journal of the	Mercury, (see quicksilver)
Medical SciencesVII 413	Merganthaler, Ottmar, inventor I 380
Research VII 421	Merit system, (see civil service)
Beaumont's stomach researchesVII 419	Merriam, William R
Bigelow, JacobVII 412	Trusts, in the light of census re-
Bohn, LawerenceVII 402	turns, on
Boylston's smallpox inoculation. VII 404	Merrimac, the
Chapman, NathanielVII 413	Collier, in Spanish war IX 249
Chelmers' workVII 405	Iron CladIX 259
Colleges, improvement ofVII 418	Structure ofIX 329
Doctors, early AmericanVII 403-4	Metals,
Educators in, leadingVII 419	Trusts in, statistics ofIII 164
Ether, discovery ofVII 414	(See under various names of
Fuller, SamuelVII 402	metals)
Harvard school ofVII 418	(See also machinery)
History of, in U. S. earlyVII 425	Metallurgy
In AmericaVII 402	ElectroVII 27
Holmes, Bayard, on American	(See also electricity)
surgeryVII 423	Metcalf, Victor H
Importance of, in U.S., earlyVII 409	American trade and commerceIV 1
Institute of PhiladelphiaVII 413	Meterology
Journal of, and physical sciences. VII 413	American work inVII 10
King's college foundedVII 407	Government expendituresVII 45
Leading American achieve-	Weather bureau, work of theVII 390
ments inVII 419	Metric system
McDowellVII 429-30	U. S. andVII 46
Medical and Philosophical	Mexico
Register, theVII 411	Arbitration with, in 1883 II 211
College in U. S., firstVII 406	Capital in, AmericanIV 116
Medicine in America, (T. B.	France, designs of, on
Wiggins)VII 402	Pius fund referred to HagueII 222
Nitrous oxide	Savages, agreement to pursueII 219
Number of schools in U. SVII 422	Tehauntepec ship railwayII 234
Operations originated by	War withII 281
AmericansVII 430	Mexican cession
Ovariotomy inventedVII 429-30	Land of, statistics of
Pott, JohnVII 402 Prescriptions, earlyVII 403	War (see war, Mexican)
	Meyer, B. H
Repository, the, medicalVII 411 Revolution, in theVII 408	Fraternal insurance in U. S X 233 Miantonomah, Monitor IX 296
Rush BenjaminVII 409	
Rush and BardVII 407	Mica
Russel, WalterVII 407	(Pratt, J. H)VI 36
Schools and the college I 176	Occurrence of, in U. SVI 361-
Society, medical, first in U. SVII 417	Production of
Superiority of American surgery VII 423	
Three epochs ofVII 42	Uses of
University of PennsylvaniaVII 42	Value of
Vaccination introducedVII 411	sity of Michigan)
Wotten, ThomasVII 402	Middleton, J
Yale medical schoolVII 411	ClayVI 31
(See also dentistry)	Middleton, Peter, physicianVII 40
	The state of the s

Miles, Nelson A	Mine workers—Continued.
Spanish war, order of, onIX 11	Sufferings ofVIII 356
The United States army and its	Town, typicalVIII 352
commandersIX 11	Truck storesVIII 352
Military academy (U.S.)	Union perfectedVIII 349
Architecture of	Unionizing, backward inVIII 350
(See also West Point)	Working year, shortness ofVIII 347
Militia (see war, guard, national,	Mineral resources of U. S
	(Charles Kirchoff) VI 1
and army, the)	Minerals (see mining)
Milk Y 200 200	Mining
AdulteratedX 292, 298	Abrasive materials, (J. H.
(See also dairying)	
Miller, Lewis	Pratt)
Mower of 98	THE COM CHANGE THE CONTROL OF THE CO
Patents of	Alternating currents asea
Miller Merritt Finley	American and world's, compared III 5
Reaping machines, evolution	American copper ores, (Arthur
ofV 67	Lakes)VI 260
Miller, farm, the	Asphaltum, (J. Struthers) VI 395
Mills (see factories)	Barytes, (J. H. Pratt) VI 443
Millspaugh, Charles F	Bauxite, (J. Struthers) VI 266
Indian cornV 158	Belt conveyors VI 35
MillstoneVI 435	Benefited by science VI 12
Milton, John, an advertiser	Bitumen, (J. Struthers) VI 395
Milton, John, an advertiser	Blast furnaces, modern VI 87
Milwaukee	Borax, (J. Struthers) VI 414
Cruiser	Bridge tramways VI 32
Home for soldiers atIX 427	Chain elevators VI 34
Mines	Clay, (Joseph Middleton)VI 312
Feudalism ofVII1 328	Coal, (E. W. Parker) VI 182
Railroads, stimulated by trans-	Chain machines inV 143
continentalIV 290	
Western, helped by	Cutting, Crotation of the
(See also mining)	
Miners	Edity Court III Co.
Accidents toV1 20	
Children ofV1 20	Coal, world's need and U. S.
Comstock fireV1 21	supplyVI 186
Crown Point horrorV1 21	Compressed air machinesVI 43
Day's work ofVI 18	Comstock lode, development of VI 24
DrillingVI 19	Copper, (J. M. Sheahan)VI 252
Fire damp, test forVI 18	Copper ores, (A. Lakes)VI 260
Hours of workVI 19	Crane, use of theVI 35
Inventions to protectVI 19	Crude mineral products, (J.
Laws protectingVI 20	Struthers)VI 317
Life of the	Cyanide
Risks of decreasingVI 23	Establishments, number of VI 227
Risks of decreasingVI 19	D (C E Manage) VI 997
Salt, Work Of	Process, precious metals re-
Underground workers, (Charles	A har the (Charles F
nigguis)	Munroe)
(See also mining)	ProductionVI 227
Mine workers	
Character ofVIII 354	
Children asVIII 354	Dangers of resserted
Conditions ofVIII 346	Discoveries, early, in C. S
Espionage onVIII 352	EIGCUITC
Fatalities and risksVIII 347	Coar cuttoris
Homes ofVIII 353	Dreages
Incentive have noVIII 355	Dinis
Life of (John Mitchell)VIII 346	Hamage
Organization ofVIII 348	Holsting
Social importance ofVIII 355	Horsepower M
Strike of 1900VIII 350	Lighting inVI 55
SULIKE OF 1800	

Mining—Electric—Continued.	Mining—Continued.
LocomotivesVI 47	Shearing machinesVI 4
MotorsVI 53	Shot firing methodsVI 46
Plants in CaliforniaVI 40	Steam shovelsVI 31
Power at RatonVI 39	Steel hardening metals, (J. H.
Obtaining	Pratt)VI 177
Transmission ofVI 40	Trust and its methods,
PumpsVI 54	(C. S. Gleed)VI 157
Signal systemVI 60	Sulphur and pyrite, (J. Struth-
Electricity	ers)VI 348
In, (T. C. Martin)VI 37	Talc and soapstone, (J. H. Pratt).VI 424
CheapVI 40	Telpherage methodVI 55
PlacerVI 57	TramwaysVI 3
Mines usingVI '38	Underground workers, (C. Hig-
Gold and other resources of far	gins)VI 1
west (J. A. Latcha)VI 215	U. S. steel corporationVI 1
And silver, (I. A. Hourwich)VI 202	Value of mining productsVI 1
Inflow of, (E. H. Roberts)VI 242	Of products in U. SVI
Graphite, (Joseph Struthers)VI 300	VentilationVI 5
Gypsum, (Story B. Ladd)VI 407	Water difficulties in VI 2
High tension methodsVI 47	World's supply of copper, (J. M.
Handling raw material, (W.	Sheahan)VI 25
Fawcett)	(See also iron, machinery,
Iron and steel, America's primacy '	miners)
in, (J. F. Crowell)VI 112	Minneapolis
Iron industry, (F. W. Taussig)VI 105	System, grain elevator
Iron, (W. Fawcett)VI 80	U. S. cruiserIX 29
Iron ores, (J. Birkinbine)VI 61-62	Wheat, receivingV 15
Lead and zinc ore, (I. A. Hour-	Minnesota
wich)VI 273	Railroads, helped by
Lifting magnetsVI 36	Territory of formedII 27
Loading of vesselsVI 31	Wheat grower, as
Mechanic arts andVI 12	Minor, Thomas C
Mechanical engineering inVI 446	Researches ofVII 42
Metal working machinery, (E. H.	Mints, the U. S
Sanborn)VI 283	Architecture of
Methods of, in different de-	Mississippi river, the
positsVI 28	Colonists, and AmericanII 26
Mica, (J. H. Pratt)VI 361	French exploration of
Occurrence and properties of VI 361	White man's visit, first
Mine workers, (C. Higgins)VI 15	Missouri
Mineral pigments, (J. Struthers)VI 317	Filipinos, sympathizes withII 20
Wealth of the westVI 221	Railroad, first to charter trans-
Minerals in U. S., distribution	continentalIV 27
	State formedII 27
Monopoly andVI 10 National policy in mineral re-	Territory of
	Mitchell, J. K., physicianVII 42
sourcesVI 9 Nationalities in AmericanIII 254	Mitchell, J. W., physicianVII 41
Natural gas, (F. H. Oliphant)VI 380	Mitchell, John
Resources, abuses ofVI 8	Hopelessness of laborVIII 42 The mine worker's life and
PetroleumVI 366	aimsVIII 34
Phosphate rock, (J. Struthers)VI 438	
Pick miningVI 42	Mitchell, Maria, astronomerVII 6 Mitchell, O. M., astronomerVII 7
Platinum, (D. T. Day)VI 297	Mitchell, S. Weir
Precious stones, (G. F. Kunz)VI 324	PhysicianVII 42
Progress of, (J. Birkinbine)VI 446	Mobs
In U. SVI 11	Modus vivendi
Pyrites and sulphur, (J. Struth-	Nature ofII 22
ers)VI 348	Molasses (see sugar)
Quicksilver, (J. Struthers)VI 289	Molders
Rotary drillsVI 45	Hernia, saved from VIII 29

Molders—Continued.	Moore, Sir Thomas
Pride ofVIII 361	LawyersII 95
UnionVIII 93	Morgan, C. E., physicianVII 421
(See also foundries, labor)	Morgan, George W
Molybdenum	Sword ofIX 398
Steel, for hardeningVI 180	Morgan, J. H
Monadnock, monitorIX 293	Capture ofIX 194
Money	Morgan, J. Pierpont
In U. SIII 477	Banks, centrol ofIII 419
Paper, filth onIII 396	Steel exploits of
Philippine islands, of	Trust, opinion of steelVI 163
Specie, 1820-30, exports and	Wall street, power of, in
imports ofIV 106	Morgan, John, American physicianVII 406
(See also finance, gold)	Morgan, Thomas
Mongols	Vacuum sugar pan ofV 213
Assimilating power of	MorosIX 79
Monitor, the	Government of
Iron cladIX 259	Rebellion ofIX 85
(See also armour plate)	Morris. Clara
Monopolies	Morris, Gouverneur
RailroadIV 294	Constitution, writer of theII 202
Monroe James, President	Morse, Moses L
Declares Monroe doctrineII 170 War of 1812 andIX 28	Pin machine ofVII 329
Wai of form and	Morse, Samuel F. B
Monroe doctrine	Merits ofVII 123
Blame, James G., on	Pauper VII 122
Debts, not a bar to collection of	Telegraph, inventor ofVII 117
DeclaredII 170	(See also telegraphs)
Hay, John, onII 145	Morton, T. G., surgeonVII 435
Influence of, (F. B. Loomis)II 175	Morton, W. T. G
International law, notII 186	Ether, applied, to surgeryVII 415
Interpretation of, properII 189	Moseley, Charles S., inventorVII 356
Isthmian canal, andII 243	Moseley commissionVIII 4, 8
Limitations of, (J. B. Moore)II 107	Moss agate (see agate, moss)
Limitations ofII 186	Motors (see automobiles and power,
Opponents of, AmericanII 191	motive)
Petin M., onII 183	Mott, Valentine, surgeonVII 431
Polk's new, meaning of	Mounds, theVII 42
Roosevelt's 1903 speechII 189	Interpretation of
Santo Domingo, American pro-	Mount, May Wilkinson American women in philanthropyX 218
test against Spanish sover-	American women in pilitantinopy
eignityII 178	Mountains
Spanish war, effect of, on	Mulhall, Michael
Strength of, source ofII 177	American greatnessVII 27
Of to-day	PowerIV 199
Washington's plans, a departure	Mullaney, John F
fromII 196	Roman Catholic universities 1 203
Montague, Gilbert Holland	Municipal ownership
Standard oil company, rise and	New York subway andIV 45:
supremacyIII 171	Wealth, street railroads of, as
Montague, La, M., American	leveler ofIV 310
physicianVII 404	Municipalities
Montana	Carter, James C., on
Railroads, helped byIV 213	Freedom, need of local
Territory of, formedII 275 OrganizedII 286	Importance of, prime
Monterey (monitor)IX 296	Mayor and council
Monterey (montor)	Merit system in (C. R. Woodruff.).11 42
Moody, W. HIX 278	Political, evils of
Moore, John Bassett	Population congested
Diplomacy, American	Self government (E. B. Smith)II 41
Diplomacy, 21morrows	

Municipalities—Continued.	Naval academy, the—Continued.
State, as agents of the	Methods ofIX 35
Creatures of the II 418	Obedience a principleIX 36
Cleanliness inII 114	Origin ofIX 35
(See also cities)	Percentage number of gradua-
Munsterberg, Emil	tionsIX 35
Poor relief in U. SX 139	Regime, dailyIX 36
Munsterburg, Hugo	Social life
American women I 402	
Murfree, Mary, novelist	Teaching methodsIX 35
Murhpy, J. B	War college, theIX 36
Researches ofVII 421	GamesIX 36
SurgeonVII 433	Navigation
Music	Rivers freeII 16
(A. J. Gantvoort) 320	Navy, the
Awakening of, in America 325	Act of 1809IX 21
Blind, for theX 102	Apprentice systemIX 37
Education and 324	Armour improvementsIX 28
Life national, influence of, on I 320	Plate makingIX 32
Public schools and I 328	Armoured ships of, firstIX 33.
Reforming force 327	List ofIX 33
Social value of I 323	Battleships, recent advance in
Teaching of I 254	(J. D. J. Kelley)IX 30
War and 1 322	Bill of 1883IX 29
Wise men on I 321	Birth ofIX 18
Mussey, Reuben Dimond, surgeonVII 430	Bon Homme Richard-Serapis
Mutual Life Insurance CoIII 461	fightIX 25
	British bases near U. SIX 18
* *	Building of the Atlanta, Boston,
N	and ChicagoIX 29
	Charleston, invasion ofIX 18
Napoleon	Civil war, theIX 18
Britian blockaded, declaredII 166	
	After theIX 28
Britian blockaded, declaredII 166	
Britian blockaded, declaredII 166 Lawyers, on	After the
Britian blockaded, declaredII 166 Lawyers, on	After the
Britian blockaded, declaredII 166 Lawyers, on	After the
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha VI 397	After the
Britian blockaded, declared	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of. II 166 Wars, policy of. II 138 Naptha. VI 397 Nasby, Petroleum V. I 365 Nashua.	After the
Britian blockaded, declaredII 166 Lawyers, on	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of. II 162 Wars, policy of. II 138 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. VII 356 Nashville, gunboat. IX 300	After the
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha VI 397 Nasby, Petroleum V I 366 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before IX 300	After the
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha VI 397 Nasby, Petroleum V I 365 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before (Theodore Roosevelt) II 452 National Cash Register Co VIII 336 Natural gas (see gas, natural)	After the
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 166 Wars, policy of II 138 Naptha VI 397 Nasby, Petroleum V I 366 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before (Theodore Roosevelt) II 452 National Cash Register Co VIII 3366	After the. IX 28 And IX 27 Destruction of union ships IX 19 Importance of, in IX 19 Operations of, in IX 19 Commerce, and IV 51 Continental, department, IX 20 Cost of, annually IX 28 War ships IX 28 Cruisers, modern IX 28 Of 1885 IX 29 Cushing's heroism IX 26
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha VI 397 Nasby, Petroleum V I 365 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before (Theodore Roosevelt) II 452 National Cash Register Co VIII 336 Natural gas (see gas, natural)	After the. IX 28 And IX 27 Destruction of union ships IX 19 Importance of, in IX 19 Operations of, in IX 19 Commerce, and IV 51 Continental, department, IX 20 Cost of, annually IX 28 War ships IX 28 Cruisers, modern IX 28 Of 1885 IX 29 Cushing's heroism IX 26 Decatur, Stephen, career of IX 25
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha VI 397 Nasby, Petroleum V I 366 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before (Theodore Roosevelt) II 452 National Cash Register Co VIII 336 Natural gas (see gas, natural) National guard	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. Watch industry. VII 356 Nashville, gunboat. IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural) National guard. (See guard, national.)	After the
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha VI 397 Nasby, Petroleum V I 366 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before (Theodore Roosevelt) II 452 National Cash Register Co VIII 336 Natural gas (see gas, natural) Naturalization Naturalization Naturalized citizens, rights of II 171 Naval academy, the.	After the. IX 28 And IX 27 Destruction of union ships IX 19 Importance of, in IX 19 Operations of, in IX 19 Commerce, and IV 51 Continental, department, IX 20 Cost of, annually IX 28 War ships IX 28 Cruisers, modern IX 28 Of 1885 IX 29 Cushing's heroism IX 26 Decatur, Stephen, career of IX 25 Drills, daily IX 37 1812, in IX 26 Engineers in IX 34
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of. II 162 Wars, policy of. II 138 Naptha. VI 397 Nasby, Petroleum V. I 365 Nashua. Watch industry. VII 356 Nashville, gunboat. IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural). National guard. (See guard, national.) Naturalization. Naturalized citizens, rights of. II 171	After the. IX 28 And IX 27 Destruction of union ships IX 19 Importance of, in IX 19 Operations of, in IX 19 Commerce, and IV 51 Continental, department, IX 20 Cost of, annually IX 28 War ships IX 28 Cruisers, modern IX 28 Of 1885 IX 29 Cushing's heroism IX 26 Decatur, Stephen, career of IX 25 Drills, daily IX 37 1812, in IX 34 Need of IX 341, 34
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha VI 397 Nasby, Petroleum V I 366 Nashua VII 356 Nashville, gunboat IX 300 Nation, the, problems before (Theodore Roosevelt) II 452 National Cash Register Co VIII 336 Natural gas (see gas, natural) Naturalization Naturalization Naturalized citizens, rights of II 171 Naval academy, the.	After the. IX 28 And. IX 27 Destruction of union ships. IX 19 Importance of, in. IX 19 Operations of, in. IX 19 Commerce, and. IV 51 Continental, department, IX 20 Cost of, annually. IX 28 War ships. IX 28 Cruisers, modern. IX 20 Cushing's heroism. IX 20 Cushing's heroism. IX 25 Decatur, Stephen, career of. IX 25 Drills, daily. IX 37 1812, in. IX 26 Engineers in. IX 34 Need of. IX 341, 34 Engineering efficiency. IX 37
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha VI 397 Nasby, Petroleum V. I 365 Nashua. VII 366 Nashua. VII 356 Nashville, gunboat IX 300 Nation, the, problems before. (Theodore Roosevelt) II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural) National guard. (See guard, national.) Naturalization. Naturalization. Naturalization. Naturalization. Naturalization. IX 364 Accomplishments taught IX 364 American science, and VII 58	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of. II 162 Wars, policy of. III 138 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. VII 366 Nashville, gunboat. IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural). Natural guard. (See guard, national.) Naturalization. Naturalization. Naturalization. IX 356 Accomplishments taught. IX 364 American science, and VII 55 Architecture, of. I 272	After the
Britian blockaded, declared II 166 Lawyers, on II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha VI 397 Nasby, Petroleum V I 366 Nashua VII 366 Nashville, gunboat IX 300 Nation, the, problems before. (Theodore Roosevelt) II 452 National Cash Register Co VIII 336 Natural gas (see gas, natural) Natural gas (see gas, natural) Naturalization Naturalization	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. VII 366 Nashville, gunboat IX 300 Nation, the, problems before. (Theodore Roosevelt) II 452 National Cash Register Co. VIII 336 National guard. (See gas, natural) National guard. (See guard, national.) Naturalization Naturalization. Naturalization IX 360 Accomplishments taught IX 364 American science, and VII 56 Architecture, of I 272 Buildings and grounds of IX 355 Cadets', expenses of IX 355	After the. IX 28 And. IX 27 Destruction of union ships. IX 19 Importance of, in. IX 19 Operations of, in. IX 19 Commerce, and. IV 51 Continental, department, IX 20 Cost of, annually. IX 28 War ships. IX 28 Cruisers, modern. IX 20 Cushing's heroism. IX 20 Cushing's heroism. IX 25 Decatur, Stephen, career of. IX 25 Drills, daily. IX 37 1812, in. IX 26 Engineers in. IX 34 Need of IX 341, 34 Engineering efficiency. IX 34 Mellville's plans for IX 34 Supervision, inadequacy of IX 34 Farragut, D. G., career of. IX 26 Fleet of 1779. IX 20
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. Watch industry. VII 356 Nashville, gunboat. IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural). Natural gas (see gas, natural). Naturalization. Naturalization. Naturalization. Naturalization. See guard, national.) Naturalization. Naturalization. IX 356 Accomplishments taught. IX 364 American science, and VII 56 Architecture, of I 277 Buildings and grounds of IX 355 Cadets', expenses of IX 355 Qualifications of IX 355	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of. II 166 Wars, policy of. III 138 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. Watch industry. VII 356 Nashville, gunboat. IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural). Naturalization. (See guard, national.) Naturalization. Naturalization. Naturalization. IX 356 Accomplishments taught. IX 364 American science, and VII 5 Architecture, of. I 272 Buildings and grounds of. IX 355 Cadets', expenses of. IX 355 Qualifications of. IX 355 Classics ignored. IX 355 Classics ignored. IX 355 Classics ignored. IX 355	After the. IX 28 And. IX 27 Destruction of union ships. IX 19 Importance of, in IX 19 Operations of, in IX 19 Commerce, and IV 51 Continental, department, IX 20 Cost of, annually IX 28 War ships. IX 28 Cruisers, modern IX 28 Of 1885. IX 29 Cushing's heroism IX 26 Decatur, Stephen, career of IX 26 Drills, daily IX 37 1812, in IX 34 Need of IX 34 Engineers in IX 34 Engineering efficiency IX 34 Mellville's plans for IX 34 Supervision, inadequacy of IX 34 Farragut, D. G., career of IX 26 Fleet of 1779. IX 27 Goodrich's raids IX 12 Goodrich's raids IX 20
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of. II 162 Wars, policy of. III 138 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. VII 366 Nashville, gunboat. IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural). Natural gas (see gas, natural). Naturalization. Naturalized citizens, rights of. II 171 Naval academy, the. (W. G. Richardson). IX 356 Accomplishments taught. IX 364 American science, and VII 58 Architecture, of. I 272 Buildings and grounds of. IX 352 Cadets', expenses of. IX 353 Cadets', expenses of. IX 353 Classics ignored. IX 366 Cruising. IX 366 Cruising. IX 361	After the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. VII 366 Nashville, gunboat IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural) National guard. (See guard, national.) Naturalization. Naturalized citizens, rights of II 171 Naval academy, the. (W. G. Richardson). IX 364 American science, and VII 58 Architecture, of I 272 Buildings and grounds of IX 352 Cadets', expenses of IX 353 Classics ignored. IX 364 Cruising. IX 364 Curriculum of. IX 365	After the. IX 28 And. IX 27 Destruction of union ships. IX 19 Importance of, in. IX 19 Operations of, in. IX 19 Commerce, and. IV 51 Continental, department, IX 20 Cost of, annually. IX 28 War ships. IX 28 Of 1885 IX 29 Cushing's heroism. IX 26 Decatur, Stephen, career of. IX 25 Drills, daily. IX 37 1812, in. IX 26 Engineers in. IX 34 Need of. IX 341, 34 Engineering efficiency. IX 34 Mellville's plans for IX 34 Supervision, inadequacy of IX 34 Farragut, D. G., career of. IX 26 Fleet of 1779. IX 20 Goodrich's raids. IX 27 Goodrich's raids. IX 20 Gunboat system ended. IX 21 Heroes of, (C. C. Fitzmorris). IX 25
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 163 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. Watch incustry. VII 356 Nashville, gunboat IX 300 Nation, the, problems before. (Theodore Roosevelt) III 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural) National guard. (See guard, national.) Naturalization. Naturalization. Naturalization. IX 366 Accomplishments taught IX 366 American science, and VII 56 Architecture, of I 272 Buildings and grounds of IX 355 Cadets', expenses of IX 355 Classics ignored IX 366 Cruising IX 366 Curriculum of IX 356 Discipline. IX 366 Discipline. IX 365	After the. IX 28 And. IX 27 Destruction of union ships. IX 19 Importance of, in. IX 19 Operations of, in. IX 19 Commerce, and. IV 51 Continental, department, IX 20 Cost of, annually. IX 28 War ships. IX 28 Of 1885 IX 29 Cushing's heroism. IX 26 Decatur, Stephen, career of. IX 25 Drills, daily. IX 37 1812, in. IX 26 Engineers in. IX 34 Need of IX 341, 34 Engineering efficiency. IX 34 Mellville's plans for. IX 34 Supervision, inadequacy of. IX 34 Farragut, D. G., career of. IX 26 Fleet of 1779. IX 20 Future of, (W. H. Moody). IX 27 Goodrich's raids. IX 20 Gunboat system ended. IX 21 Heroes of, (C. C. Fitzmorris). IX 25 Hollis, I. N., on the, in the
Britian blockaded, declared. II 166 Lawyers, on. II 94 U. S. and wars of II 162 Wars, policy of II 138 Naptha. VI 397 Nasby, Petroleum V. I 366 Nashua. VII 366 Nashville, gunboat IX 300 Nation, the, problems before. (Theodore Roosevelt). II 452 National Cash Register Co. VIII 336 Natural gas (see gas, natural) National guard. (See guard, national.) Naturalization. Naturalized citizens, rights of II 171 Naval academy, the. (W. G. Richardson). IX 364 American science, and VII 58 Architecture, of I 272 Buildings and grounds of IX 352 Cadets', expenses of IX 353 Classics ignored. IX 364 Cruising. IX 364 Curriculum of. IX 365	After the

Navy, the—Continued.	Of 1896IX 301
Improved gunsIX 285	Of 1897–8IX 301
Machinery	Of 1900IX 302
In war of 1812, (J. R. Soley)IX 212	Of 1900
Isthmian canal, and	Of 1902IX 304
Jones, John PaulIX 208	Of 1903ideag about
Jones, John Faut IX 225	Twentieth century ideas about fighting ships, (I. V. Lee)IX 281
Career of	fighting snips, (1. v. Leo
Landsmen in IX 374	Upbuilding of, (Theodore Roose-
Life aboard shipIX 374	velt)IX 273
Losses in early battles	War college, the naval, (Henry
Marine corns, the	Wilson) IX 366 War of 1812 IX 188, 266
(E W Harrington) IA 3/0	War of 1812 IX 227
Dutice of	Ship of 1812IX 227
Torly history.	Size of, neededIX 304 State of, in 1809IX 215
History	State of, in 1809
Importance of	Submarine experimentsIX 302
Number of	Torpedo craft, (J. D. J. Kelley)IX 317
Officers of	Training enlisted menIX 278
Mounimag and Monitor	Trumbull-Watt engagementIX 203
Monitor type fails	Weapons of
Mongan I H capture of	West Indies, strategic value ofIX 403
Morris Robert, plans of	Whipple's exploitsIX 207
Marcal academy (W. G. Kicharu-	(See also armor plate, battle-
	ships, naval academy, tor-
Naval nower, rank of U.S. III	snips, navar academy,
Mary foreign policy, American,	pedo-boats)
Two-come of hy	Nebraska
Marr novy the (Fred Rovce)IA 200	BattleshipIX 302
D.::1ding the	Railroads, helped byIV 211
at	Needles (see pins and needles, sewing
Numerical strength of, in men12 500	machines)
Old Amorican sea fights, (H. H.	Negro slavery
Darroson)	Africa, conditions of, inVIII 387
Olisson II Downy Career OL	A miguiture in
Delicar of	The best field forVIII 400
Destan Horaco	A tigong of
Therrow choordship	Not goodVIII 402
Projudice against, early	Backwardness of
Gunnarted by Lloyd, Quincy,	Di-th and death rate of 34
and Story	Cities in VIII 392
Desiton the monitor	Circulation of in U.SVIII 384
Detions for men	Constitution and
Pogniting	G-ima and
Develution of the CV. V.	Criminals, asVIII 403
Paullin)	Di-sage and
Operations of, in theIX 201	Trict shution of geographicalviii 555
Sailors, need of	Domestic servants y III 330
Son nower (H. A. Herbert)	Domestication of
Seamen, training of, (W. W.	Drod Scott case, Opinion of
Phelps)IX 371	Supreme collet
Seas, freedom of, established by	Education race problem and
U. S	Of future
Ship building, new ships impetus	Effect of on negroes
toIV 125	Targhytion of Jahor, (Carl
Ships of 1886	TZolcom)
Of 1887	1 73 03
Of 1889IX 297,	The flare of og
Of 1891IX 29	The same approlishility of In VIII 590
Of 1893IX 29	Toodom effects of Ol
Of 1894IX 30	
Of 1895IX 30	· ·

Negro slavery—Continued.	New Orleans
Improvement of	FoundedII 26
Increase of	New York
Industrial experiments forVIII 407	Armored cruiserIX 29
Inferiority ofX 272	Independence, approves Ameri-
Kentucky, inVIII 393	canII 2
Labor, (Carl Kelsey)VIII 386	Vote of, on American 1
LynchingsX 134	Lawyers in early
Mississippi, inVIII 394	New York city
Morals, low, ofVIII 404	High buildings in 29
Occupations ofVIII 393	Subways ofIV 45
Packing industries, inVIII 227	New York Central railroad
Plantation, conditions ofVIII 250	Employees' clubsVIII 32
Political rights of	New York Life Insurance CoIII 46
Suppression of	New York, university of (see univer-
Population, movement of, andI 32-3	sity of New York)
Post-bellum state of	New Zealand
Progress when free	Arbitration inVIII 3
Prostitution and	Strikes inVIII 12
Race characters of 24	Wage solution ofVIII 29
Problem in the south	Newark, U. S. cruiserIX 29
Redistribution of 33	Newcomb, J. E
River regions, of theVIII 396	Patents ofV 8
School problem ofVIII 406	Newcomb, SimonVII
Seacoast, on theVIII 393	Astronomy, some aspects of
Segregation ofVIII 390	AmericanVII 6
Future ofVIII 392	Newell, F. H.
Slavery conditionsVIII 388	Reclamation of the west
Suffrage andX 271	Newport (cruiser)IX 30
A mistake	Newspapers
Texas, inVIII 397	American, (Medill McCormick)I 36
Trades, in the	Early I 36
Unsanitary conditions of	Associated press
Unskilled laborers, asVIII 391	Change gradual, in
White emigrants vsVIII 405	Correspondence, early
Neil, John, physicianVII 419	Special
Nelson, N. O	Cost of production
Nevada	Earnings of
Admitted	Editorials, early
Territory organized II 286	Editors, strength of early
New England	History, early
Art, influence on	Hoe's inventions
Lawyers in early	Mechanical improvement
Music and 325	Mexican war's, influence onI 37
Railroads, stock and share-	Modern era of
holders ofIII 335	Newsgathering, early
Shipbuilding industry, early IV 68	Improvement of I 37
Water power inIII 349	Systematized I 37
New Granada	News secondary, in early
Canal treaty of 1846 II 233	Number of, in various statesI 36
Isthmian canal, and theII 232	Paper used for
Panama canal, proposedII 232	Political growth and 37
New Jersey	Power of, political I 37
BattleshipIX 302	Press invented 1 37
Independence, opposed to Amer-	Presses, cylinder
icanII 18	First iron I 37
Vote of, on American	Modern 37
Manufactures, early, ofIV 101	Progress of, rapid
New Mexico	Speed of service 37
Ceded to U. S	Stereotyping introduced
Territory of, formed	Telegraphs first used 37

Newspapers—Continued.	Ohio
Varieties of, in U. S	Manufactures of, early
(See also advertising)	Oil, coal (see petroleum)
Niagara	Oil
Motive power, how usedVII 221	AdulteratedX 293
Power, distribution ofVII 241	Consolidation of, industryIII 72
Power plants, American and	Foreign view of AmericanIV 57
CanadianVII 240	Fuel in rice industry, asV 288
Plants ofVII 239	(See also cotton seed, Standard
Utilization ofVII 239	(See also cotton seed, Standard
Turbine engines atVII 257	Oil trust)
Niblack, Lieut. Commander	Oliphant, F. H
Battleship, theIX 308	Natural gasVI 380
Nicaragua	PetroleumVI 366
British blockades ofII 188	Olives
Canal treaty of 1867 240	First American
Nichols, Edward	Industry, AmericanV 249
Discovered bauxite in U. SVI 266	Production ofV 8
Nicholson, Henry C., electricianVII 133	AmericanV 249
Nickel	Olney, Richard
Hardening steelVI 178	Growth of our foreign policyIl 124
Nitro cellulose (see guns)	Omaha
Nitroglycerine (see guns)	Packing center, asV 177
Nitrous oxideVII 427	O'Neil, Charles
Surgery, applied toVII 415	Armor-plate makingIX 326
Nixon, Lewis	OpalsVI 334
Shipbuilding, progress and prom-	In U. S
ise of AmericanIV 119	Mining ofVI 335
North, S. N. D	Open Door, theII 258
Typewriters, andVII 367	Oranges VII 44
North, the	Experiments, in, government
Representation of, in congressII 47	First American
Northern Pacific railroad	Ord, J. T
Military line	Sword ofIX 395
Northwest territories	OresVI 61
Colonization, barred from, by	Iron, (J. Dirkmondo)
President MonroeII 170	(See mining, also various metals)
Oregon, President Polk onII 176	Oregon
Nott, Joseph, C., surgeonVII 431	Admitted
Nuts	BattleshipIX 298
Production, trees andV 8	Becomes part of U. S II 284
(See also fruits)	President Polk onII 176
(DOC WISO II also)	Railroads, helped byIV 212
0	Orient, the
O .	American interests inII 248
Oats	Australian foreign tradeII 256
Area and productionV 5	Capital, absorption of foreignII 257
ExportsV 32	Openings for
Production 30	China compared industrially with EuropeII 258
Observatories (see astronomy)	Diplomacy, American, andII 171
Oceania	European supremacy is threat-
American trade withIV 5, 43	enedII 261
OchersV1 319	Japan's foreign trade II 256
O'Donnell, John	Mills of China and Japan II 251
Uses to which iron is putV1 130	Opportunity, equal in
Office work	Railroads, effect of, in tradeIV 263
Labor saving systems of, (H. S.	Solving of
Fullerton)VII 370	Trade of United StatesII 14
Orden city	
Railroads of	Orphans X 16
Ogle, Henry	Alding.
Reaper of	Cost of supporting

Osborn, J. D	Packing—Continued.
Binder of 1859 91	Statistics
Osborne, D. M	HogV 18
Patents of V 88	Percentage, for citiesV 180
Osborne, John Ball	Receipts and slaughteringV 179
Expansion through reciprocityII 375	Texas live stockV 18
Osgood, R. T.	Weighing animalsV 188
Patents ofV 87	West, center in
Ostriches	Army in the revolutionIX 13
Growing industry, a V 47	Paducah, gunboatIX 30-
Otis, James	Page, Thomas Nelson
Assistance, attack of, on, writs ofII 99	Page, Charles, Grafton, electricianVII 124
Outerbridge, A. E., Jr	Merits ofVII 126
Premium system of wagesVIII 291	Paine, ThomasII 12, 10
Owen, John	Paints
Player I 315	BariumVI 322
	GypsumVI 320
TD.	Metallic paintsVI 318
P	OchersVI 319
7. 10. 11	Venetian redVI 32
Pacific cable	Painting (see art)
American support ofII 146	Pan-American
Pacific ocean	Congress of 1826 and 1890II 198
Trade, American, with lands ofIV 15	.Panama canal
Pacific islands	Colon, cost of harbor at
U. S. policy in	Commission of 1889IV 173 Powers of presentIV 180
Packing	Cost, estimated of
Agriculture, influence onV 33	Distances via, table ofIV 183
Animals cared forV 184	Efforts, first AmericanIV 170
Beef, canning V 188	French, original plans of theIV 17
PreparingV 34	Plant, price ofIV 173
Salting V 187	Plant, value of
Western supply, early 176	Unwise criticism of
By-productsV 190	Labor, problem of, requiredIV 17
Description of	Lumber, and
Cars, ownership of	New Granada, canal proposed
Chicago methods, modernV 182	by 23
Rise of	Origin of
Cincinnati, decline of	Plans, various, suggestedIV 17
Food saver, asV 33	Property, American, inIV 17
House, a modernV 185	Railroad monopoly
Integration of, industryV 188	Salubrity of isthmusIV 17
Killing and dressingV 186	Some engineering problems of
Labor, alien, inVIII 226	(J. F. Wallace)IV 17
Division of	Treaties with Panama and
Organized, andVIII 226	Colon citiesIV 17
Lands, cattle raising V 182	Water supply and sewerageIV 17
Lard renderingV 189	Works incident toIV 17
Loading on carsV 189	Pancoast, Joseph, surgeonVII 43
Missouri cities, trans	Panics
River, west ofIII 366	Of 1855
Monopoly and railroadsIV 336	1857VI 24
Of products	1883II 40
Prices	Paper
Refrigeration, influence of	Statistics of paperIII 16 Parks
Refrigerators, use of	Need of, in cities
St. Louis in	Parker, Edward W
Sausage productionV 189	CoalVI 18
200	Z-W

TTT 404	Door
	PeasV 7
Parks, Charles T., surgeonVII 433	Area and production
Partridge, Charles A	Peanuts V 7
The army in the civil warIX 51	Area and production
Pasteur, Louis,	Peasants
Work ofVII 34	Distilled raco
Paternalism (see socialism)	Inferiority of, political
Patent laws	Peck, George R
(O. H. Platt)VII 384	Constitution, the march of the11 57
American system, foundation	Peirce, Benjamin, astronomerVII 62, 64, 74
American system, foundation	Penitentiary
ofVII 382	Joliet convicts, statistics ofII 109
ColonialVII 379	(See also crime)
Defects inVII 387	Penn, William
Department createdVII 383	Immigration, encouraged byI 19
History, earlyVII 376	Old Bailey, trial of, atII 100
Requisites forVII 388	Old Bailey, trial of, at
Rights, theory ofVII 377	Pennock, C. M
Of patenteesVII 389	Inventor flexible stethoscopeVII 420
Detents	Pennsylvania
Number granted in U. SVII 376	CruiserIX 302
U. S., laws, (C. M. Anderson)VII 376	Independence, opposed to Amer-
U. S., laws, (C. M. Anderson)	ican
(See also industry, inventions,	Manufacturing, earliest in
science)	Western, settlement ofIII 12
Patriotism, American	Penology (see crime)
Confidence, Gallger of Over	Pensions
Patten, Simon N., sociologistVII 98	Act of 1890IX 438
University training of business	Appropriations forIX 430
men 210	Civil service, and
Paulding, J. K., author 354	Cost of, since 1890IX 430
Paullin, Charles Oscar	Cost of, since 1890
American navy of the revolu-	Early, in U. S
tionIX 200	Good inIX 435
Basemond	Law present
Immigration and	Number of invalids'IX 434
Number in America	Origin of present system
Statistics of, in citiesX 131	Public debt and, compared
Statistics of, in civies	Overlifications for a
(See also charities)	Potos of
PauperismX 16	Gnonish war veterans, for
Drink and	Statistics of since 1865
(See also charities)	II Q evetem (W. H. Glasson)IA 423
Peace	Malue of annual
Amorican government, draw-	Vetoed, actsIX 43
backs to, in	Widows'IX 43
America's work for the world's,	Number ofIX 43
(John Hay)	When grantedIX 43
Cornegie's temple of	When grantedVIII 24
Gift to	PeonageVIII 24
Dicarmament, American	Pepper, E., physician
Grant's, U. S., utteranceII 153	Down Matthew C. navai liero
Hague, American influence atII 200	Perry, Oliver HazardIX 3
Conference, future of	Corpor of
Conference, leading principle	Peru cotton in
Conference, leading principle	Dotor the Great
ofII 201	Lawyers and
	Dotin M
Convention terms of	Monroe doctrine
McKinley and Roosevelt for	IX 20
Possevelt's President, message in. II 150	1 outer, or or or
II S. commissioners to	Petroleum
Venezuela case, lawyers' part	VI 36
in 100	
Weshington on	VI 37
Peace Dale, town ofVIII 334	Companies, earlyVI 37
Peace Date, with date	

Petroleum—Continued.	Phillippine Islands—Continued.	
Composition of	Olney, Richard,	
Formation ofVI 36	Purchase of, condemned byII	131
FuelVI 37	On war inII	129
IlluminantVI 37	Policy, II	130
LubricantsVI 37		
Mining of, earlyVI 37		
	Railroads, need ofII	
Occurrence in U. S VI 36		88
Pennsylvania development, early VI 37		63
Pipe linesVI 37		45
Transportation, earlyVI 37		44
Varieties ofVI 36	The second secon	
World's occurrence ofVI 37	2	206
Pfahler, William H	What we have done for the,	
talVIII 8	(Luke E. Wright)II	289
Pharmacy	(See also army, the)'	
Adulteration and	(See also Filipinos)	
Phelps, Elizabeth Stuart		365
Phelps, William Wallace	Phonograph, the	
Growth of secret societiesX 24	Office work, inVII	372
Phelps, William Woodworth	Phosphate rockVI	438
Training of seamenIX 37	Chemistry ofVI	438
Philadelphia, U. S. cruiserIX 29		439
Philanthropy	FrenchVI	439
Abnormal menX 4	Geology ofVI	441
Carnegie institute, motive ofII 44	History, earlyVI	438
.Colleges, benefactions for smallI 16		439
Education and 1 26		
Educational, (R. C. Woods)X 5		
Problem of educational		9
Science in, (C. R. Henderson)X 4		26
Women, American, in, (May Wil-	Henry's magnetsVII	27
kinson Mount)	Liquid airVII Oersted, work ofVII	12 27
Philippine Islands	Victorian age, in theVII	6
Agriculture of		26
American world-power, as factor	(See also electricity)	20
inII 20		
Anti-American rebellion, theIX 7		299
Army, the, in, (L. E. Wright)IX 7		
Army inIX 7.	(J. Struthers)VI	317
China and the open door	(See also paints)	
Commission, work of		273
Condition of, improved		
Conditions before and after	High buildings, for	291
Spanish warIX 7		
Cotton, andIV 1		327
Currency of		
Duties of U. S. toII 12	Howe, J. I., inventions ofVII	
Filipinos, rights of II 29		
"Friarlands", purchase ofII 29		
Great Britain's help inII 14		
Handicap, as a		
Missouri's resolution of sym-	Pin, making aVII Sewing machines, andVII	
pathyII 20' Moros campaignIX 8	ma a second	
SubjugatedIX 83		040
The, governmentIX 83		269
Naval base, as aII 13		

Pineapples	Population—Continued.
American industry	American
Florida	Density of
Pioneers	Origins of 9
American, earlyIV 270	Heterogeneity of 11
	Area and, from 1790 to 1900II 267
	Chicago, mixed. of
Pipe lines (see petroleum, Standard	
oil, natural gas)	Clima, density of marriage
PipestoneVI 338	Cities, of
Pistols (see guns)	Increase since 1864IV 253
Pitkins, the	Kentucky, Pennsylvania, Vir-
Watch makersVII 353	ginia, and New York, early of. III 12
Pitt, William (of Pendeford)	Louisiana purchase territory, ofII 275
Reaping machine of	Mexican territory in 1850, ofII 285
	Peasants a distinct race
PittsburgVI 166	Inferiority of
	Pennsylvania, early I 19
Pius, fund	Race and in U. S
Hague, referred toII 222	Definition of
Plantations	Superiority, (E. A. Ross)I 48
Labor and VIII 248	Races
Plaster of ParisVI 410	And classes 5
Plaster (see gypsum)	In U. S., union of
Plasterers	Unification of
Conditions ofVIII 21	Varieties of world
Platinum	Representation, basis of, inII 35
(David T. Day)VI 297	Suicide, race in U. S., (W. F.
History and productionVI 297	Wilcox)
Platt, O. H	Tariff, and
Patent lawsVII 384	The American people, (J. R.
Players (see theaters)	Commons)
Plums	U. S., early, in
Burbank'sVII 108	Voting populationX 136
Plunger, submarine boatIX 300	West, increase of, in theIII 364
Pneumatic machinery (see com-	Western cities, early increase
pressed air)	of, in
Poe, Edgar Allan 357	(See also suicide, race)
Poisons (see adulteration, and medi-	
cines, patent)	Porter, Horace
Police	The American navy
Appointment of, in cities	Porto Rico
City, lot of policeman in II 116	Charity in
Factory acts andVIII 77	Conditions of, in 1898 II 298
Foreigner aversion of, to	TI 000
Regulations of, limit of II 120	EducationII 299
Policies, American political	Fruit industry of
(Charles W. Fairbanks)II 392	Rights of
Civil service, and	Roads ofII 298
Gold and silverII 408	Strategic value ofIX 409
Trade and industry, increase of	Sugar and tobaccoII 299
under republicanII 393	TelegraphsII 298
Political corruption	Trade, volume of
Grover Cleveland, on	What U. S. has done for, (E.
Political economy	Maxey)II 297
America, inVII 93	Post offices, high
Jenks' workVII 95	Buffalo architecture 1 283
U. S., rise of, in	Postal service
Politics	American, greatestVII 272
Nomination by direct vote of the	Railroads, andIV 249
people, (R. M. LaFollette)II 397	Postmaster general
Population	Power to make treaties
Agriculture andIV 25	Treat, empowered to

Potatoes		Frecious stories	
Area and productionV	6	(G. F. Kunz)VI	324
Crops, relative value of V	13	Preserves, fruit	
Production, increasedV	31	AdulteratedX	294
Pott, John, physicianVII	402	President, the	
Potts, Jonathan, physicianVII		Agreements, authorized to makeII	
Pottery (see clay)		Civil service, part of, inII	
		Duties of, Justice Marshall on II	66
Poverty		Hague tribunal, can submit cases	
Crime and, in cities, (J. R.		toII	
Commons)X	128	Treaty, power of, inII	208
(See also crime, relief, poor)		Power, from senate, must guard	
Powder, smokeless (see guns)		hisII	205
Powell, E. P		Powers of, growth ofII	204
Twentieth century farmingV	431	Press, the (see newspapers)	
Powell, John Wesley		Presses printing (see printing and	
Irrigation andV	344	newspapers)	
Power, motive		Priestly, Neville	
Aggregate in manufacturesVII	210	Railroads, onIV	242
American manufactures, em-		Princeton, cruiserIX	
ployed in, (E. H. Sanborn)VII	210	Printers	
Boot and shoe industry, increase		Union label andVIII	184
of, inVII	233	(See type setters)	
Electric motorsVII		Printing	
RoadsVII		And publishing, (W. S. Rossiter)I	380
Electricity, advantages ofVII		Artistic progress	
Gas engines, number ofVII		Colors	
Horsepower in paper millsVII		Goodson graphotypeI	
Average, in all industriesVII		Hoe's inventionsI	
		Invention of (see also newspapers)I	
Of gas enginesVII Of steam and electricity com-	210		
	015	Machinery benefit to laborI	
paredVII		Merganthaler's ideaI	381
Of waterVII	217	Paper used forI	385
Increase ofVII		Presses, perfectingI	382
In high buildingsVII		Progressive efforts of	386
Labor andVII		Scudder monolineI	
Niagara, cost ofVII		Stereotyping	
Use ofVII		Type founding, modernI	
Number of, establishing, usingVII		Typesetting machinesI	
States of union, in variousVII		Wages affected by machines,I	381
Statistics of, comparativeVII		(See also advertising)	
Steam, total, ofVII		Prisons	
Value of product andVII	213	Philanthropy andX	41
Varieties and quantities, of, in		(See also crime)	
U. SVII		Pritchett, H. S	
Water, and electricityVII	219	Industrial and technical educa-	
Changes inVII	218	tion I	133
In CaliforniaVII	360	Industrial and technical training	
In ConnecticutVII	227	in popular educationI	134
In the SouthVII	227	The educated man and the stateI	234
In Washington stateVII		Privateers	
Increase ofVII		Napoleonic wars, inII	163
Of the lakesVII	226	Prize cases	
Powers, L. Grand		Supreme court, power ofII	90
Fifty years of American agri-		Problems before the nation	-00
cultureV	36	(Theodore Roosevelt)II	452
Pratt, Joseph HydeVI		Produce exchanged (see speculation)	102
Abrasive materialsVI		Production	
BarytesVI		American, earlyIV	22.4
MicaVI		Cheap, problems ofVIII	260
Steel hardening metalsVI		Foonomy of American	52
		Economy of, AmericanIV	
Talc and soapstoneVI	424	Hawaii, increased, ofIV	45

Production—Continued.	Publishing (see printing and news-	
Immigration andVIII 241-2	papers)	
Integration and economy ofIII 63	Pullman George M	
Machinery andVIII 272	Railway car, inventedIV	391
Potatoes	Town ofVIII	328
Production, American and	(See also railway cars)	
world's, compared	PumiceVI	436
Production	Puritan, monitorIX	293
Gold and silver, world's, in 400	Puritans	
yearsIV 48	U. S., in	16
Statistics of American since 1870. IV 34	Purviance, A. J	
Tropics, American, in theIV 44	Patents ofV	86
United States leads world	Pyrite	
in	(J. Struthers)VI	348
Frofit sharing	Deposits of, U. SVI	
(N. P. Gilman)VIII 302	Occurrence ofVI	
Cleveland Cliffs Iron CoVIII 335	U. S., inVI	
National Cash Register CoVIII 336	Uses ofVI	
Plan, N. O. Nelson'sVIII 334	0505 02	
(See also wages)	0	
Promoters	×	
Assembling a propositionIII 235-6	QuartzVI 339, VII	436
Capital assembled byIII 233	Quicksilver	
Demands onIII 235	(J. Struthers)VI	289
Experts, rely on	American depositsVI	294
Floating a propositionIII 237	ProductionVI	
Gates, John W., as aIII 234	History, earlyVI	
Good for all partiesIII 240	New Mexico industryVI	
Industry, their contribution toIII 238	Occurrence ofVI	
Knowledge, acquire technicalIII 235	Ore of	
Moore, W. H., as aIII 235	Oregon, industry ofVI	205
Profits justified, share ofIII 242	Properties ofVI	
Right of, to their III 239	Uses ofVI	
Qualities of a goodIII 234	CommercialVI	
The work of the, (Edward S.	VermilionVI	
Meade)		232
Typical case, essentials of aIII 238	Quincy, Josiah	216
Property	Supports navyIX	210
Labor solidarity, andVIII 429		
ProsopiteVI 338	R	
Protection		
In U. S., (A. Maurice Low)II 312	Race problem (see negroes)	
(See also tariff)	Race question, the	
Protocol	(See negroes)	
Lake Erie reef, cedingII 225	Races	
Spain, with, in 1877II 226	Ability ofI	15
Spanish war, nature of, in	Acclimatization ofI	50
Turkey in 1830II 226	Agriculture andI	16
Prouty, Charles A	Climatic adaptabilityI	49
Control of railway ratesIV 348	Competition andI	66
Provisions	Crime andX	134
Chicago, shipments east fromIII 363	Democracy incentive to energy I	53
(See also packing)	Economic foresightI	57
Prunes	Energy ofI	51
American, firstV 245	Genius andI	61
ProductionV 245		15
	Germans in U. S	
	Germans in U. S	52
Prussia	Government andI	52 48
British blockade ofII 166	Government andI Heredity, failacies ofI Huguenots in U. SI	48
British blockade of	Government andI Heredity, failacies ofI Huguenots in U. SI	48
British blockade ofII 166 Treaty with, early AmericanII 160 Prussic acid (see mining)	Government and	48 16
British blockade of	Government andI Heredity, failacies ofI Huguenots in U. SI	48 16

Races—Continued.	Railroads—Continued.
Martial superiority 60	Claim department, work ofIV 37
Mexican war andIX 40	Association, work of inter-
Mongols, assimilating power ofI 50	nationalIV 37
	Coal andIV 333, VI 18
2.201 01 0110011011111111111111111111111	Transported byVI 19
Standard of, rising 66	Colorado Midland routeIV 28
Northern, superiority of 49	Combination, remedies forIV 35
Pride of blood 64	Companies, number ofIV 22
Puritans in U. S	Compatition for markets IV 26
Causes of race superiority, (E. A.	Competition for marketsIV 26
	In ratesIV 22
Ross) 48	Consolidation of
Self-reliance and 54	Backward in
Standard of comfort and 66	Constitution, and the
Statures, comparative	Protected byIV 35
Thrift and I 56	Construction department, duties
U. S., different, in	ofIV 37
Rae, J. H	NewIV 37
Cyanide process, inventor ofVI 230	Copper in the West, andIV 29
Raftery, John H	Cotton trade, andIV 26
Largest farm in world	Court decisions defled
Rails (see steel)	CubanII 31 Debt to, the nation's (J. J. Hill)IV 25
Railroad cars (see cars)	
Railroads	Denver & Rio Grande, building
AccidentsIV 232	ofVI 27
Advertising, benefit of, to com-	Engineering ofIV 28
merceIV 209	New route of
Agriculture, western andIV 210	Departments of law, real estate,
And growth of V 44	and taxesIV 37
American, compared with foreign. IV 206	Development, post-bellumIV 22
Early, and industryIII 26	Of AmericanIV 23
Pathways, earlyIV 270	Directors, statistics ofIII 34
Models for foreignIV 205	Distances, magnificent American, IV 21
Statistics ofIV 220	Division superintendent, duties
Travel, ease of.,	ofIV 37
Boston & Albany, ownership ofIII 332	
	Early importance of
Boston & Maine, ownership ofIII 332	Earnings and investmentIV 26
Bridge supervisor, duties ofIV 379	Increase ofIII 47
Bridges, American, abroadIV 203	IncreasedIV 32
Building materials, discrimina-	Of AmericanIV 20
tion in	Elevation and increase of tracksIV 23
Canadian Pacific, completion ofIV 277	Employees' earnings
Capital, early, forIV 236	Interest of, inIV 22
Invested inIII 103	Laws protectingVIII 5
Of, concentration of	Number ofIV 22
Vast new, neededIV 238	England the birthplace ofIV 23
Capitalization of pooled roadsIV 329	Ericsson, John, andIV 23
Car accountant, duties ofIV 381	Evans, OliverIV 23
Cars, development of, (G. A.	Evils of discrimination,
Hutchins)IV 390	Exchange, facilitate
Early history of	
	Export trade, and
Central and Union Pacific, com-	Fares, service, and wagesIV 21
pletion of	Financing, early, ofIV 22
Improved, routes of	Finance methods, EnglishIV 22
Charges, minimum of	Proposed newIV 22
Chemistry, inVII 85	Flour monopoly andIV 33
Chicago and Great Western,	Foreign trade, andIV 26
ownership ofIII 332	Freight
China and Russia, rates and	Cars capacities ofIV 20
wages in	Charges, American and foreignIV 21
Civilization, followed byIV 207	Claims, magnitude ofIV 37
Civilizers, as	Department work of the IV 37

Railroads—Freight—Continued.	Railroads—Continued.
Handling, speed ofIV 209	And laborVIII 408
How, it is billed 376	American superintendence of III 254
Rates, American and Euro-	Labor's debt to, (G. M. Walker)VIII 408
peanIV 256	LaFollette's plan for control of .IV 345-6
	Laws, crudeness ofIV 225
Statistics	Should be enforcedIV 315
Traffic, annualIV 232	Legislation of 1902 a failureIV 322
Transportation, cost ofIV 220	Life, have intensifiedIV 244
Equalizing cottonIII 215	Living, have changedIV 246
Government control of, (M. H.	Locomotives, American, abroadIV 201
Smith)IV 316	And cars, number ofIV 229
Only adequate power to	Hauling power ofIV 208
deal withIV 341	Lumber industry, and growth ofIII 359
Opposition of, to	Management of, soundIV 261
Opposition toIV 352	Master machanic, duties of theIV 381
Ownership of	Materials of industry, andIV 247
Government ownership	Meat monopoly andIV 336
	Mileage, American, greatestVII 271
(Martin A. Knapp)IV 355	And progressIV 206
Ills curable byIV 357	And value ofIV 251
Need ofIV 348	Increase by stagesIV 250
Objection toIV 356	More neededIV 226
Politics inIV 356	Yearly, ofIV 229
Grain monopoly andIV 334-5	Mining industry, as help toIV 211-13
Granger lawsIV 299	Stimulated byIV 290
And constructionIV 302	Missouri first to charter trans-
Benefits ofIV 306	continentalIV 275
Depression of, and	Trans-Missouri caseIV 223
Earnings andIV 303	Monopolies asIV 349
Repeal ofIV 305	Makers of
"Granger legislation" againstIV 222	Nature of
Great Northern system, needs	Neville, PriestleyIV 242
ofIV 261	Northern Pacific a military
Greatest impetus in AmericaIV 236	road
Growth, country's, since 1830IV 237	Northern securities prosecutionIII 216
Part of, in American com-	Ogden City ofIV 279
mercial	Operation, statistics ofIV 228
Post-bellumIII 372	Opposition to, earlyIV 208
Since 1827IV 228	Organization, (G. T. Sampson)IV 367
Health, general and	Organization, of the Central Pa-
High rates, power of, to main-	cific and Union PacificIV 275
tainIV 328 History of, American, earlyIV 217	Charts ofIV 369
Early, in AmericaIV 235	Oriental trade, andIV 265
Home, food, and clothing, andIV 249	Overcharges, remedy forIV 352
Illinois Central, opening ofIV 237	Ownership of, and the lawIV 260
Owners ofIII 332	Change ofIII 391
Planned	Degree of diffusion of
Income and outgoIV 230	Eastern, widely diffused III 393
Industries, creators of newIV 251	IndividualIII 396
Interference with, right of states	Stock, diffuseIII 439
	Pacific coast, lumberIV 264
to	Railroads, general effects of IV 292
Interstate commerce lawIV 222, 257	
Creation of	Passenger rates, basis of
Interstate commission crippled IV 320	Department, work of theIV 373
Report for 1898	StatisticsIV 229
Law, proposed amendment of IV 259	Past, present, and future of
Isthmian, canal, andIV 192	American, (M. E. Ingalls)IV 217
Japanese trade, effect onIV 265	Pennsylvania law of 1873IV 333
Labor and prices, effect of, onIV 256	Plants, maintenance ofIV 371

Railroads—Continued.	Railroads—Continued.	
Porto RicanII 298	Suburban homes, andIV	245
Postal service, andIV 249	Supreme court onIV	318
Power of, vast	Taxing lawsIV	223
Preferential rate lawIV 323	Telegraph lines andIV	481
Prime importance ofIV 255-6	Tickets, how handledIV	
Problem, (A. B. Stickney)IV 298	Threaten industriesIV	
Problems, early American and	Time saved byIV	
EuropeanIV 237	How multipliedIV	
Prosperity, depends on popularIV 263		
Publicity, need ofIV 225	Trade unions andVIII	
Rates, control of (C. A. Prouty)IV 348	Traffic, British and AmericanIV	240
Are made, howIV 262	Canal and river traffic, statistics	
Constantly increased	ofIV	239
For staples, need of lowIV 225	Manager, duties of theIV	
Increasing cheapness ofIV 241	Increased, rates higherIV	
UnjustIV 350	Train crews, duties ofIV	380
Rebate injunction of 1904III 212	Dispatcher, duties ofIV	
RebatesIV 334	Transcontinental linesIV	
Railway regulation, (R. M. La	Distances, table ofIV	
Follette)	Capital and debt ofIV	
legulation, need of	First needs forIV	
Reorganization of, continualIV 367	First, proposedIV	
Revenues, distribution of	Routes, earliestIV	274
Roadmaster, duties of	Surveys, firstIV	27
Rochester, and growth ofIV 209	Transportation companies, pow-	000
Rocky mountain grades ofIV 277	ers ofIV	290
Russian, and American machin-	Department, organization of IV	
eryVII 202	Problem in N. YIV	
Extension ofIV 207	Trust breeders, asIII	
Safety of travelIV 231	Trusts, grew likeIII	83
St. Paul, Minneapolis and Mani-	Rebates the cause ofIV	30.
tobaIV 287	Union and Central Pacific mili-	07
Santa Fe built	taryIII	
Albuquerque branch ofIV 284	Vice andIV	
Ownership ofIII 333	WagesIV	
Route of	Wall street, power ofIII	
Service, American and foreignIV 213	Watered stock, profits onIV Western commerce, andIII	
Share holding in different states,	Topography ofIV	
averageIII 339	Who owns the, (Solomon Hueb-	240
Shops, organization of	ner)III	331
Siberian, trans, and American	Willcox, John B., andIV	
steelIV 201	Wisconsin commission, causes of IV	
Six great groups of, theIV 329	Earnings inIV	
Social and economic effectsIV 244	Law of 1903 defeatedIV	
Southern Pacific and Texas	Law regulatingIV	
Pacific, opening of theIV 276	RatesIV	
Route of	(See also bridges, commerce, inter-	
Speed, American, and other train	state)	
facilitiesIV 214	Railroads (electric)	
Standard oil, andIII 53 IV 349	Arnold's, Bion, J., predictionsIV	447
Manipulated byIII 173-5	Birth of electric tractionIV	
State, commission proposedIV 313	Commutator, use of theIV	
States, new andIII 373	Construction, principles ofIV	
Were first to controlIV 298	Electric company, generalIV	
Station agents, duties of IV 380	Growth of, rapidIV	
Stock and share holders, tables	Inventions inVII	
ofIII 334	Locomotive, the electricIV	
Average holdings of	Past, present, and future of elec-	
Stockholders, number of, increas-	tric traction, (Frank J.	
ingIII 337	Sprague)IV	445

Railroad—electric—Continued.	Railroads—interurban—Continued.
Pennsylvania and New York	Roads, hurt local help through
Central, equipment ofIV 446	traffic ofIV 437
Power used by, amount ofVII 211	Traffic, affectedIV 435
Richmond, first atIV 442	Wheeling-Indianapolis chain ofIV 421
Sprague's multiple unit sys-	Railroads (underground)
temIV 445	Proposed, first, for N. Y. cityIV 454
Thomson-Houston, development	New York subways, (James
OfIV 443	Creelman)
Third rail for elevated	Tunnel under Hudson, Pennsyl-
Trunk lines not probableIV 447 Railroads, (interurban)	vania, \$50,000,000
(Edward Dana Durand)IV 416	New York subway
Causes of	-
Central states, of	And muncipal ownershipIV 452
Chicago systemIV 422	Bids for construction ofIV 455
Cities, to, most profitableIV 430	Bill for
Classification	Building of
Country merchant, hurt theIV 432	Capacity of
Opinions ofIV 433	Cost of
Detroit system	Per mile
Distance travel by, longIV 437	Equipment of
Earnings of, annualIV 422	Difficulties of tunnelingIV 453
And car-mileageIV 423	Financing of
And populationIV 425	Laying out routeIV 458
Growth of	Mayor Hewitt plans, in 1888IV 45
Electric, advantages ofIV 427	Municipal ownership of IV 458
Fares, comparativeIV 427	New, proposedIV 45:
Farmers, patronized by	Present owners ofIV 45
Freight carriersIV 431	Route ofIV 45
Mail, and express busi-	Trains and fare ofIV 45
ness of	New York city, history of transit
Future of	in
Increased travel fromIV 429	Tunnel, Beach's N. Y., of 1868IV 45
Indianapolis systemIV 421	Rainfall
Lake Erie systemIV 420	United States, ofIV 2
Limited serviceIV 431	Raisins
Massachusetts systemsIV 419	(G. C. Hussman)
Mileage of Connecticut	American, first
IndianaIV 418	California, first
MaineIV 418	Climate and irrigationV 25
MassachusettsIV 418	Grape and, production, in U. S.,
MichiganIV 418	(G. C. Hussman)V 25
New HampshireIV 418	Picking and packingV 26
Ohio	Production, earlierV 25
PennsylvaniaIV 418	And profitsV 25
Virginia	Yearly V 26 Ramsay, A
Nature of	Glacial theory of
	Randall, Abraham
ofIV 419	Reaper of
Operating expenses	Randolph, Governor
Pleasure, used for	Veto powers proposed byII 7
Social importance of, growingIV 426	Randolph, Jacob, surgeonVII 43
Steam changed to electricIV 440	Raton
Conversion of, to electric,	Electric power at mines ofVI 3
growingIV 440	Reaping machinery
Difference between electrical	(See agricultural machinery)
andIV 426	Reciprocity
Fares, have reducedIV 437	American policy1I 14
Lines, competition met by IV 439	Blaine, work ofII 38
Railways, counter-policy of IV 438	Dingley law andII 38
Transitudini committe Someli enitting a rec	

Reciprocity—Continued.		Relief, poor—Continued.	
Expansion through. (John Ball		Indemnity for disastersX	81
Osborne)II	375	IndianaX	145
France, with, in 1898II		Indoor and outdoorX	
Function true ofII		JewishX	
Harrison's administration, in II			
Hawaiian, treatyII		Literature ofX	
Jamaica treaty, opposition toII		Martinique disasterX	86
		MarylandX	145
Kasson treatiesII		MedicalX	156
Criticism ofII		Money undesirable asX	85
Soundness ofII		National conference plansX	
McKinleyII			
Marcy-Elgin treatyII	378	New York board methodsX	
Navigation, of 1818IV	93	State aid associationX	
Porto Rico, with, in 1902II	217	Outdoor, preferableX	
Retaliation, by EuropeII		Public and privateX	153
Tariff, a remedy forII		Salvation army and X	173
When should be removedII		State aidX	163
		Board corruptionX	
Treaties, variousII	319	Boards, powers ofX	
Red Cross association	01	Reports ofX	
Work ofX	81	System in needed X	
(See also relief)			
Reed, Jonathan		Unemployed, theX	
Reaper ofV	86	Uniformity-non, ofX	149
Reform		(See also charities)	
Cities, need of civil service inII	119	Religion	
Folk, J. WX	307	Colleges andI	172
Political evolution and civil serv-		Education and the churchI	71
ice reform, (H. J. Ford)II	406	And, (A. T. Hadley)I	257
(See also civil service, tariff, char-	200	Immigration andI	18
		Race superiority and I	62
ity, crime, prisons)	1	Remington typewritersVII	
Reformatories	004	Renssalaer instituteVII	
Abuses inX			280
Drake L. D.,onX		Renssalaer, Stephen	0.0
HistoryX	262	War of 1812, andIX	32
ModelX	267	Representation	
Training, manual inX	265	Basis of second apportionmentII	43
(See also crime)		Struggle overII	37
Reid, Whitelaw		Beginnings of representative gov-	
Strength of the republicII	443	ernment, (E. J. James)II	35
Reis, Philip		Congress, discussion by firstII	41
Telephone, inventor ofVII	138	Census, provision for, by second	
Relief	100	congressII	50
	00	Constitution andII	49
Army aid in disastersX	83	German principle ofII	
Organization for quickX	79		38
Quick action neededX	79	House of representatives to fix,	
Red Cross association, work ofX	81	right of theII	46
Trained agents neededX	78	Method of, adopted by second	
Varieties of emergencyX	78	congressII	43
Relief, poor		New basis ofII	54
(Emil Munsterberg)X	139	Senate, opposition of, to basis	
Agencies forX		ofII	50
Children, aidingX		Opposition of, to second appor-	
Conferences forX		tionmentII	42
		Second apportionment vetoedII	43
Crippled childrenX			42
Defectives, care ofX		Bill for, in congressII	
District of ColumbiaX	145	States inII	40
Emergency, in disasters, (E. T.		Storey, opinion of, on Washing-	
Devine)X	77	ton's vetoII	54
Expenditures for, in N. YX		Veto of bill, text of Washington's II	51
Immigrant settlementsX	152	Washington, veto of, of appor-	
ImmigrationX	150	tionment billII	49

Republican party, the	Rives, Amelie 366
Prosperity andII 392	Roads
Strength of, (W. Reid)	Gallatin's report
Tariffs andII 329	Porto RicanII 298
Revolution, the American	Turnpike companies, earlyIII 38
Army of, (J. S. V. Paddock)IX 13	(See also railroads, canals, trans-
Organization of	portation)
British military policyIX 18	Roberts, Ellis H
Burgovne's campaigns	Inflow of goldVI 242
Campaigns of, the principal1X 14	Strength and weakness of Ameri-
Canada, conquest of	can financeIII 392
Loyalty of	Can imance Marchall O philana
Causes of	Roberts, Mrs. Marshall O., philan- thropistX 219
Crisis of	Debiner Mannico U
Foreign aids to	Robinson, Maurice H
Fought in the North	Rock crystalVI 339
Navy of. (C. O. Paullin)1X 200	Rockefeller, John D
Review ofIX 21	Golden rule, and
State of, in 1776 11 10	Power in railroad worldIV 345
State of, in 1776, (Ida M. Tar-	Rodgers, gunboatIX 300
bell)	Roeber, E. F
Yorktown, siege ofIX 21	The development of industrial
Rhode Island	electro-chemistryVII 140
BattleshipIX 302	Roe, Gilbert E
Constitution, acceptsII 60	Insurance investigationIII 459
Manufactures of, earlyIV 101	Rogers, Howard J
Rhoads, E., physicianVII 421	Relation of education to com-
Ricarte, Artemio	mercial and industrial devel-
Philippine msurgence	opmentIII 300
RiceV 287	Rolfe, John
(Daniel C. Roper)	Tobacco grower, first 278-9
Belt, the American	Poman Catholic
Civil war, influence of	Education, need of higher 209
Crops, first American V 21 Grading of V 290	Universities (J. F. Mullaney) 207
History, early V 287	Central 207
Improvement of	European of 207
Loss from milling imperfectionsV 291	Founding of the
Milling methods, modernV 289	Functions of I 212
Deimitive 209	History
Oil as fuel in industry V 200	Improvement of the
Production, recentV 288	Purpose of
Diabanda I	Spread of
Skilled labor	Universality of 1 218
Wages of skilled laborVIII 275	Roosevelt, Theodore
Dishardson W G	Monroe doctrine, 1903 speech ofII 18
Naval academy	Peace, message onII 15
Diductor William Barret	TrustsII 45
Government control of banks111 441	First message on
Diffee (see guns)	Upbuilding of the navyIX 27
Dights	Wall street, check onIII 38
Citizens' in industry	Descript Nicholas J
Dillioux Norhert	
Sugar evaporation, method of V 213	Post Flihu
Pinley E. W	TX 16
Sword of	Daniel C
Dimens	Cetton machinery V 12
Navigation, Iree, 01	RiceV 28
m-ado on American	Posebery Lord
Tradic of American, statistics of IV 239	American industry
Inited States, U.	TrustsIV
(See also steamboats)	

Ross, Edward A	Sampson, George T	
Race superiority 48	Railroad organizationIV 3	6
Ross, William A., sociologistVII 100	San Francisco	0
Rossiter, William S		2
Printing and publishing I 380	U. S. cruiserIX 2	9
Rothschilds, the	San Juan Hill	7
Hessians, the, and theIII 406	Battle ofIX Sanborn, Edward H	4
Royce, Frederic	Development of metal working	
Submarine telegraphsIV 487	machineryVI 2	28
The new navyIX 288	Power employed in American	
Rubies (see corundum)	manufacturesVII 2	1
Rum,	Sandys, George, writer 3	
Molasses act of 1733 IV 84	Sanitation	
Rush, BenjaminVII 407	American shops, inVIII	1
Russell Walter, physicianVII 402	CubanII 3	
Russia Chinaga tanda palatian	Lecky, onX 1	9.
American Chinese trade, relation of, toII 133	Santa Fe railroad	
Cotton in	Ownership of	3
Lawyers inII 100	Santa Monica, Calif	0
Transportation charges and	Home for soldiers atIX 4 Santiago	4
wages in	Landing of troops atIX	6:
Wheat production	Santo Domingo	0,
RutileVI 180	Spanish sovereignity of, and	
Rutledge, Edward	American protestII 1	7
Debate of, on colonial freedomII 13	Sapphires (see corundum)	
Rye	Sargent, Frank P	
American crops, first	Problems of immigration	3
ProductionV 30	Sault Ste. Marie	.,
I TOURCETOM:	TonnageIV 1	4:
	Sausage (see packing)	
S	Sausage (see packing)VII 2	
S	Sausage (see packing)	5.
St. Clair, Arthur, soldierIX 2-3	Sausage (see packing)VII 2	9:
St. Clair, Arthur, soldierIX 2-3 St. Louis	Sausage (see packing) Saws, pneumatic	9:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302	Sausage (see packing) Saws, pneumatic	9: 6:6:22:
St. Clair, Arthur, soldier	Sausage (see packing) Saws, pneumatic	9: 6:6:22:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421	Sausage (see packing) Saws, pneumatic	9:16
St. Clair, Arthur, soldierIX 2-3 St. LouisIX 302 CruiserIX 302 Manual training school, site of firstVIII 421 Mounds ofVII 42	Sausage (see packing) Saws, pneumatic	9:16 22:3:3:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poetI 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In EuropeVII Scholarship, AmericanI 2	9: 6:2:3: 9:0:0:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke region. VI 1 Saxe, John G., poet. I 3 Saylor, Charles F. Beet sugar industry of U.S. V 2 Sayre, Lewis A., surgeon. VII 4 Scholars. In Europe. VII Scholarship, American. I 2 Popularizing fruits of I 2	9: 6:2:3: 9:0:0:
St. Clair, Arthur, soldier IX 2-3 St. Louis. Cruiser IX 302 Manual training school, site of first. Mounds of VII 421 Mounds of VII 42 Packing center as V 177 Salesmen. Number of, in U.S. IV 509 Services of IV 507	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poetI 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In EuropeVII Scholarship, AmericanI 2	9: 6:2:3: 9:0:0:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In Europe VII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprisesVI 1	9: 66:22:33:99:00:00:00:00:00:00:00:00:00:00:00:00:
St. Clair, Arthur, soldier IX 2-3 St. Louis Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen Number of, in U.S. IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 509	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poetI 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In EuropeVII Scholarship, AmericanI 2 Popularizing fruits ofI 2 Schools (see education). Schwab, Charles M. Carnegie's enterprisesVI 1 Steel trust, the	9: 66:22:33:99:00:00:00:00:00:00:00:00:00:00:00:00:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 509 Volume of business IV 508	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke region. VII 1 Saxe, John G., poet. I 3 Saylor, Charles F. Beet sugar industry of U. S. V 2 Sayre, Lewis A., surgeon. VII 4 Scholars. In Europe. VII Scholarship, American. I 2 Popularizing fruits of. I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprises. VII 1 Steel trust, the. III Science, American.	9: 6: 2: 3: 9: 0: 4: 6:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 509 Types of IV 509 Volume of business IV 508 Saloons IV 508	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U.SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In EuropeVII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprisesVI 1 Steel trust, theIII Science, American. (E. S. Holden)VII	9: 66 22: 31: 9: 10:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 509 Volume of business IV 508 Saloons Danger of gilded II 117	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In EuropeVII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprisesVI 1 Steel trust, theIII Science, American. (E. S. Holden)VII Advancement, generalVII	9: 6: 2: 3: 9: 0: 4: 6:
St. Clair, Arthur, soldier IX 2-3 St. Louis Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VIII 42 Packing center as V 177 Salesmen Number of, in U. S IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 509 Volume of business IV 508 Saloons Danger of gilded II 117 Drunkenness and X 183	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeonVII 4 Scholars. In EuropeVII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprisesVI 1 Steel trust, theIII Science, American. (E. S. Holden)VII Advancement, generalVII American association for ad-	9: 6: 2: 3: 9: 0: 4: 6:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 508 Types of IV 508 Saloons IV 508 Danger of gilded II 117 Drunkenness and X 183 Salt	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeon. VII 4 Scholars. In Europe. VII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprises VI 1 Steel trust, the III Science, American. (E. S. Holden). VII Advancement, general. VII American association for advancement of VII	9: 6: 2: 3: 9: 0: 4: 6:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 508 Saloons IV 508 Danger of gilded II 117 Drunkenness and X 183 Salt	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U. S V 2 Sayre, Lewis A., surgeon. VII 4 Scholars. In Europe. VII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprises VI 1 Steel trust, the III Science, American. (E. S. Holden). VII Advancement, generalVII American association for advancement of VII Journal of, foundation	9:33:39:00:44:6:50:50:50:50:50:50:50:50:50:50:50:50:50:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 508 Saloons IV 508 Danger of gilded II 117 Drunkenness and X 183 Salt Miners, work of VI 19 Saltus, Edgar I 366 Salvador I 366	Sausage (see packing) Saws, pneumatic	9: 66 22: 33: 9: 10: 42: 66: 50: 66:
St. Clair, Arthur, soldier IX 2-3 St. Louis	Sausage (see packing) Saws, pneumatic	9:33:39:00:44:6:50:50:50:50:50:50:50:50:50:50:50:50:50:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Manual training school, site of first VIII 421 Mounds of VIII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 508 Types of IV 508 Volume of business IV 508 Saloons IV 508 Danger of gilded II 117 Drunkenness and X 183 Salt Miners, work of VI 19 Saltus, Edgar I 366 Salvador Monroe doctrine, British blockades of, and II 188	Sausage (see packing) Saws, pneumatic	9:00 6:2:3: 9:00 4:6: 5:00 6:9:
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Cruiser IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 509 Volume of business IV 508 Saloons IV 508 Danger of gilded II 117 Drunkenness and X 183 Salt II 366 Salvador Monroe doctrine, British blockades of, and II 188 Salvation army II 188	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E. Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F. Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeon. VII 4 Scholars. In Europe. VII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education) Schwab, Charles M. Carnegie's enterprisesVI 1 Steel trust, the III Science, American. (E. S. Holden). VII Advancement, general. VII American association for advancement of VII Journal of, foundation of VII Sociologist, (M. A. Lane). VII And inventionVII Anthropology. VII	15 16 16 17 18 18 18 18 18 18 18 18 18 18
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 508 Saloons IV 508 Saloons II 117 Drunkenness and X 183 Salt Miners, work of VI 19 Saltus, Edgar I 366 Salvador Monroe doctrine, British blockades of, and II 188 Salvation army Irrigation and V 352	Sausage (see packing) Saws, pneumatic. VII 2 Saward, Frederick E Connellsville coke regionVI 1 Saxe, John G., poet I 3 Saylor, Charles F Beet sugar industry of U. SV 2 Sayre, Lewis A., surgeon. VII 4 Scholars. In Europe. VII Scholarship, American I 2 Popularizing fruits of I 2 Schools (see education). Schwab, Charles M. Carnegie's enterprises VI 1 Steel trust, the III Science, American. (E. S. Holden). VII Advancement, general. VII American association for advancement of VII Journal of, foundation of VII Sociologist, (M. A. Lane). VII Anthropology VII Army officers in VII	9:00 6:2:3: 9:00 4:6: 5:00 6:9:
St. Clair, Arthur, soldier IX 2-3 St. Louis	Sausage (see packing) Saws, pneumatic	9966 2233 9000 466 5
St. Clair, Arthur, soldier IX 2-3 St. Louis IX 302 Manual training school, site of first VIII 421 Mounds of VII 42 Packing center as V 177 Salesmen IV 509 Services of IV 507 The American, (E. W. de Bower) IV 506 Types of IV 508 Saloons IV 508 Saloons II 117 Drunkenness and X 183 Salt Miners, work of VI 19 Saltus, Edgar I 366 Salvador Monroe doctrine, British blockades of, and II 188 Salvation army Irrigation and V 352	Sausage (see packing) Saws, pneumatic	15 16 16 17 18 18 18 18 18 18 18 18 18 18

Science, American—Continued.	Scotch-Irish—Continued.
Burbank, L., work ofVII 106	Pioneers in U. S
ChemistryVII 14	Settlers, early American 19
In U. S., (F. W.	Scott, Winfield, soldier
Clarke)	Scudder, Vida L
Coast survey, beginning ofVII 57	Democracy and educationI 245
Debt of world to pure, (J. J.	Sculpture (see art)
Stevenson)VII 24	Sage, Russell
Department of agriculture,	Telegraphs, andIV 482
work ofVII 43	Sailors (see navy, the)
Electric light, (Louis Bell)VII 154	Seamen (see navy the)
Endowments forVII 38	Securities
Engineering, progress ofVII 290	American influence on, abroadIV 60
Expenditures, governmentVII 40	Investment abroad
Fifty years of, (W. J. McGee)VII 1	Maine's, Henry, opinion onII 101
Franklin, B., work ofVII 109	Seeds
GeologyVII 16	Alfalfa V 308
Geology, (Rozelle P. Handy)VII 47	Alfilaria
Government patronageVII 40	Areas of, production
GOVERNMENT PROTONIABOTTOTTOTTOTTOTTOTTOTTOTTOTTOTTOTTOTTOTT	Bean, soyV 309
Gould's Journal	VelvetV 311
OTOWOLL OF HAVIOU	Beet, sugarV 322
Hewitt, electrical achievements	Beggar weedV 311
ofVII 183	Best wheatV 302
IIISOOLY, Carry	Broom corn
Of electricity in U. S.,	BuckwheatV 302
(G. H. Stockbridge)VII 109	Clover, alsikeV 307
Industrial electro-chemistry,	Burr V 307
(E. F. Roeber)VII 140	MammothV 306
Invention of telephone, (A. G. VII 171	Red
Bell)	Sweet
	CloversV 303
Langley, work of	Garnering red V 306
Metals and precious stones, dis-	Corn for, purposes
COVCITCO III	Cotton seed
Medeorology	Cotton (C. M. Daugherty)V 115
	Cownea V 309
Obstacies to, carry interest	Distinguished from cereals 301
Felice, work of	Ferrorable localities
	Flax
I Official Coolings	Fodder 317
I lactical character cut	Grass
Frugress of	Reardless brome 315
r sychology	PormudaV 318
Scientific work of government,	Blue
(DI. 11. Little)	Johnson 317
	OrchardV 313
Simulisonian institution, work of the	Rescue V 318
SOCIOIOSY	Growth and handling of Ameri-
Sturgeon, work ofVII 114	can (A. J. Pieters) 299
	Hairy vetchV 310
Tripler, work ofVII 12	Потр 320
Universities, in	V 304
Utilitarian-nonVII 24	Millot
Weather bureau, work ofVII 390	Oats
Wireless electricity, (N. Tesla)VII 163	Pumpkin V 321
ZoologyVII 17	Production and value V 299-300
(See also the several sciences)	RapeV 321
(See also medicine and surgery).	Diag V 303, 321
Scotch-Irish	ToosinteV 318
Americans 20	Timothy 312
Composite race I 20	V 319
History of 21	, Longoon

Senate, the U. S	Ships (see also navy, the)	
Degradation ofII 407	Shipbuilding	
Foreign policy, check onII 206	American, earlyIV	68
Hague treaty, ratification ofII 208	Capacity of American yardsIV	125
Opposition of, in second appor-	Centralization, need ofIV	138
tionmentII 42	Competition with foreign sub-	
Treaties, veto of, on	sidized shipsIV	126
Secession	Cost of, foreign and American IV	
Hague treaty, principle of, inII 29	Economic difficultiesIV	
Senn, Nicholas, surgeonVII 433	Impetus toIV	
Seward, Secretary	England's influence on American. IV	
Santo Domingo, protest of,		
against Spanish sovereignity	Era of, newIV	
ofII 178	Experience necessaryIV	
Sewing machines	Foreign trade a stimulusIV	
(J. A. Boshard)VII 33	Government help necessaryIV	
American, abroad	Growth, general causes ofIV	
Bachelder's inventionsVII 344	Of, quick, in U. SIV	
Effects of, on industryVII 349	Isthmian canal, and theIV	
Exports, value ofVII 350	Klondike discoveries, influence of IV	
Greenough'sVII 346	Lakes, great, ships of theIV	
History, earlyVII 339	Maine, early, in	
Howe's inventionVII 343		
Hunt's inventionVII 342	National policy, need ofIV Navy, and theIV	
Improvements, variousVII 347	New, the impetus toIV	
Litigation, patent, earlyVII 346		
Newton and Archbold'sVII 342	Ships, first new	
Singer's patentsVII 345	New York, Maryland, and Louis-	104
Thimmonier's inventionVII 341	iana, early, inIV	101
Wilson's patentsVII 344 Shafter, General	Outlook uncertainIV	
Cuban campaign ofIX 69	Physical tests, severity ofIV	
Shakespeare	Present status and future pros-	120
Lawyers in	pects of American, (J. F.	
Shaw, Leslie M.	Crowell)IV	129
Commerce and industry of the	Product in 1822, totalIV	
WestIII 363	Production, comparative cost of IV	
Shaw memorial	Progress of AmericanIV	
American art and	Remedies suggested	
Sheahan, Joseph M	Shops, excellence of AmericanIV	
World's supply of copperVI 252	Ships built in lake yardsIV	
Sheep	Steam, early AmericanIV	119
American, firstV 23	Steel prices a difficultyIV	
(See also packing)	Tonnage statistics, 1861–1901IV	
Sheffield scientific schoolVII 301	Weakness in, AmericanIV	135
Shepard, Charles	WorkmenVIII	13
Tea culture andV 293	(See also commerce, trade, great	
Shepardson, Francis W	lakes, navy, the)	
War of 1812IX 26	Shippen, William, American physi-	
Sheridan, P. H., soldierIX 10	cianVII	406
Sherman, John T	Shoes	
Anti-trust lawII 350	Standardness of the American,	
Sherman, RogerII 13, 77	(G. Houghton)III	316
Colonies, part of, in freeingII 12	British and AmericanIII	
Sherman anti-trust law (see trusts)	Factory system, rise ofVII	318
Sherman, William Tecumseh	Floor space, total, of American	
March to the sea	factoriesVII	326
Succeeds GrantIX 10	Foreign estimate of AmericanIV	56
Swords ofIX 400	History, early AmericanVII	317
(See also war, the Civil)	How the American, have become	
Shields, James	standard, (George Houghton)VII	317
Sword ofIX 393	Last system, modernVII	323

Shoes—Continued.	American commercev 05
Machine	Colonial commerce
HeelingVII 320	Colonists, success of
LastingVII 321	Smith, Edwin Burritt
Machinery, firstVII 319	Municipal self governmentII 417
Manufactured, howVII 324	Smith, James, physicianVII 407
McKay sewingVII 322	Smith, John, author 350
PegVII 319	Smith, Milton H
ScrewVII 319	Government control of railroadsIV 316
Power factory, firstVII 323	Smith, Nathan, physicianVII 411
Power factory, first	Smith, Nathan, surgeonVII 429
Specialization in makingVII 322	Smith, Nathan Ryno, surgeonVII 431
(See also boots)	Smith, Rollin E
Shoemakers	The mighty river of wheatV 147
Unions, survival ofVIII 222	Smithsonian institution
Sholes, C. Latham, inventorVII 366	Astronomy, andVII 62
Shops, machine, (see machine shops).	Founder, and itsVII 37
Silk	Work ofVII 42
Cotton a substitute for	Smyth vs. Ames.
Culture, first AmericanV 21	Decision in
Horsepower in, millsVII 214	
Silver	Snuff (see tobacco)
Mining of	SoapstoneVI 424
Production world's, in 400	Mining of
years 49	OccurrenceVI 426
(See also finance, mining)	Uses of
Silver standard	Social question, the
Bland, andII 409	Education of business menI 218
Grant. and	Factory, as element in lifeVIII 338
Political parties and	Machine shop, and mine,
(See also finance, gold standard)	(C. B. Going)VIII 326
Simms, William Gilmore, authorI 357	Labor and education, (W. J.
Sims, J. MarionVII 432	Tucker)VIII 426
Singer, Isaac M	Improving condition of VIII 321
Inventor sewing machineVII 345	Machine shop conditions, (M.
Inventor sewing machine	Cokely)VIII 357
Sirup (see sugar)	Machinery and labor, (H.
Skelton, H. J	White)VIII 365
National ideals in iron tradeV 120	The social engineer, (W. H.
Skidmore, Mrs. W. B	Tolman)VIII 319
Ladies church unionX 219	Universities and 206
Skinner, Otis	(See also education, wages, soci-
American theaters 307	ology, labor, trades unions,
Skyscrapers (see buildings, high)	socialism)
Skyscrapers (see buildings, india)	
Slavs	Union labelsVIII 187
Slavery, negro	Social scienceVII 103
Georgia cases and Supreme	(See also seciology)
court	
Government, and the	Socialism
Independence, declaration of, in	Arphration, compusory
theII 19	Capitalists andVIII 13
Jefferson's condemnation ofII 19	DemocraticVIII 13
Lincoln, onVIII 175	Drift toward, AmericanVIII 13
Nagroos exchanged for rumIV 8	
Negroes exchanged for remining	Future ofVIII 13
Representation and	Caim of in America VII 12
West, its influence on earlyIII 1	77111 12
Slocum, Samuel, inventorVII 32	
Small, Albion W., sociologistVII 10	
Smead G. L	
Institutions for the blindX 3	9 Monopoly, cure for
Smith, Adam	Problems ofVIII 13
Sillon, Augus	•

Socialism—Continued.	South, the—Continued.
Pullman town andVIII 329	Tariff opposed to early
Tendency-non, toVIII 328	South Africa
Trade unions, attitude ofVIII 134	Boer war, U. S. intervention in II 19
Wages andVIII 137	South America
Ward, Lester F., onVII 97	American trade withIV
Woman andI 406	Cotton trade ofIV
(See also sociology)	European trade withIV 7-
Societies, farmers' (see farmers and	Imports of IV
agriculture)	South Carolina
Societies, secret	Independence, American, vote
Growth of, (W. W. Phelps)X 249	of, on
Increase of	South Dakota, cruiserIX 30
List of, with membershipX 250	Southern Pacific
Masons, power of	West, opened theIII 37
Membership, total of , in U. S X 249	Spain
	Claims commission, SpanishII 22
(See also fraternities, benevolent)	Cuba, notified to vacateII 20
Sociology	Santo Domingo, sovereignty of.
ZIIIOXIOMII IOMAOISIIII III III III III III III III III	
American, (M. A. Lane)VII 91	and American protestII 17
Ellwood, work ofVII 101	Spaulding, George H
Federation of rural forces, (K. L.	Binder of V 9
Butterfield)V 354	Spear, Thomas R., physicianVII 41
Giddings, work of	Species
Journals ofVII 102	Origin ofVII 1
PattenVII 98	Speculation
Ross, work ofVII 100	Banks, andIII 38
Small, A. W., onVII 101	Cliques in U. SIII 38
Ward, Lester F., work ofVII 97	CriminalIII 38
Soldiers (see army, the)	European and American com-
Society	paredIII 38
Railroads andIV 244	Freedom of, in U. S 37
Soil (see agriculture)	Gambling in U. S
Soley, James Russell	Gates an all around plungerIII 39
Naval campaign of 1812IX 212	Gates, J. W., corner of Louis-
"Soo," the (see Sault Ste. Marie)	ville stock
South, the	Gates-Leiter wheat dealIII 39
Activity, post-bellumIII 372	Gates' several cornersIII 39
Agricultural changes in V 55	Government bureaus, fostered
Education inV 385	byIII 38
Agriculture, (D. D. Wallace)V 373	Grain, in ChicagoIII 38
Conditions of	Morgan's, J. P., powerIII 38
Needs of, in	Peril to U. SIII 38
Statistics ofV 379	Produce exchanges
American art, and	Progress, its effect onIII 37
Commercial development of,	Wall streetIII 37
(C. M. Harvey)III 370	(See also finance)
Cotton manufactures inIII 375	Speed, John Gilmer
Recent production ofIII 374	
Evolution of negro labor, (C.	CottonV 10
	Spencer, Herbert
Kelsey)VIII 386	EducationVII 31
Farmer, credit of the	Spirits (see drunkenness)
History, early industrialIII 370	SpodumeneVI 33
Isthmian canal and trade of IV 185-7	Sprague, Frank J
Negroes in agricultureV 383	Past, present, and future of elec-
Presidents, and AmericanIII 375	tric tractionIV 44
Race problem in	Siberia
Representation of	American interests in
In congress	Isthmian canal, andIV 18
Revolution, American, andIX 20	Railway, trans, and American
War, recovery fromIII 374	steelIV 20

Sigourney, Lydia H., poetess	Standard oil—Continued.
Stael, Mme. de	Price, average, for 20 yearsIII 147
GermansVII 91	Of crudeIII 145
Germans	Decrease of, from 1892III 193
Stage, the (see theaters)	Early oilIII 173
Standard oil	How regulatedIII 198
Agreement of the Pennsylvania	How regulated
railroad and Empire Trans.	Producers Co. absorbedIII 195
CoIII 183-4	Producers' Associated Oil Co.,
With the Erie and New York	formation ofIII 191
CentralIII 183	Production, "alliance" restrictsIII 181
	Productive capacity of, vastIII 199
With the Pennsylvania, N. Y.	Pure Oil Co., formation ofIII 196
Central, and Erie roadsIII 177	Policy of theIII 196
With Pennsylvania railroadIII 185	Policy of theIII 53
With producers	
Alliances of 1880III 187	Combination withIII 176
B. and O. railroad used	How usedIII 175
Banks andIII 418	Rate war of the N. Y. Central
Beginning ofIII 172	and Pennsylvania railroadsIII 174
By-products, development ofIII 201	Rebate contract in operationIII 185
The uses ofIII 201	Refining methods, earlyIII 172
Capital increased in 1872III 180	Reorganization, basis of 1892III 195
Capitalization of 1892III 193	Of 1899III 197
Combination, first effort atIII 173	Of 1899
Competition, first attempts to	Restricted product policy,
crushIII 174	growth ofIII 191
Competitor, its presentIII 202	Rise and supremacy of, company,
Congress ordered investigationIII 179	(G H Montague)
Consolidation of U. S. Pipe and	Poolzefeller in 1865
National Transit Co'sIII 195-6	Shipping, economy inIII 193
Discoveries, oilIII 176	South Improvement CO. Organ-
Discrimination, railroadIII 171	izedIII 176
Of 1887	Supreme in 1883
Empire Co., helps theIII 186	Spy system chargedIII 201
War on theIII 184	Tariff, and the
Erie railroad and III 175	Tidewater Co., the war on theIII 189
Foreign trade of	Surrender of
Freight rates appearIII 174	Titusville mass meetingIII 178
Great lakes as a leverIII 175	Transit company-Pennsylvania.
Interstate commerce actIII 192	agranament
Legal forms unimportantIII 198	Trust described, firstIII 188
Methods of rule, presentIII 199	Dissolved in 1892III 195
Monopoly complete in 1877III 185	Formation of the, in 1881III 187
Monopoly Complete in 1011	TheII 349
National Transit Co., formation ofIII 189	Trustees, the original
Oli Doppovlyopia com-	Transported and Foreman, activ-
Ohio and Pennsylvania com-	ities of
panies combineIII 180	Cambine with
Ohio, attacked by III 193 Answered III 194	Various views of
Answered	ga-stand Tolond
Court, condemned byIII 195	Vineyard of
Grounds ofIII 193-4	ugu
Panic of 1872III 179	Authorship of
Pennsylvania railroad, victory	01 -1-
over the	TT W Willow)
Pennsylvania Transportation Co.	Claston 1/2
organizedIII 181	1 Claraco mocidado
Pipe line system, firstIII 181	To and of the from DOIATOES V 10
Development ofIII 182	Mothods of
Period from 1887 to 1892III 193	Compositors garm
Position in 1879III 186	
Prosperity and power, presentIII 202	

State, the	Steel-Continued.
Burgess, John, on	Rolling ofVI 17
Government, distinguished fromI 81	Steel hardening metals, (J. H.
Honesty in 1 238	Pratt)
Municipal government andII 417	Trust, theII 35
Purpose of 80	Trust, (C. S. Gleed)VI 15
Representation, inII 40	Tungsten, hardened byVI 180
The educated man and, (H. S.	Steel corporation, United States
Pritchett) 234	Agreement of, firstVI 15
(See also government)	Capitalization ofVI 16
Steam (see engineering, power,	Carnegie interests and VI 14
motive)	Companies of, integralVI 143
Steamboats	Constituent companiesVI 160
American, firstIV 154	State ofVI 16:
Best days ofIV 157	Stocks ofVI 163
	ExperimentsVI 13
Building yards, early	
Clermont, run of the	Factory methods ofVI 160
Decline of river tradeIV 161	First mention of
Earnings, early, ofIV 156	Frick controversyVI 143
Fitch, John, inventor of	Gates, John W., andIII 383
History, early	Genesis of, (E. S. Meade)VI 3'
Lee-Natchez race	Lakes, great, and theIV 140
Robert ENatchez raceIV 156	Iron and steel comparedVI 158
Mississippi and Ohio, first inIV 155	Markets ofVI 16
Missouri, the, onIV 156	Menace to foreign industryVI 163
New Orleans, the	Morgan's, J. P., opinion ofVI 163
Roosevelt, Nicholas J., andIV 154	Organization of, conditions ofVI 137-
Romance of the, (C. E. Fitz-	Preliminary companiesVI 139
morris)IV 152	Projectors ofVI 159
West, in the earlyIII 18	Steel, early, in U. SVI 58
(See also trade)	Uses of steelVI 159
Steamships	Stock of
Oriental trade, forVII 205	Subsidiary industries ofVI 160
(See also shipbuilding)	Sterns, Worthy P
Stearns, Joseph N., electricianVII 132	Beginning of America's foreign
Steel	tradeIV 89
American primacy in iron and	Stevens, Emerson O
steel, (J. F. Crowell)VI 112	National soldiers' homeIX 411
Armour plate makingIX 326	Stevens instituteVII 303
Bessemer converter, working aVI 173	Stevenson, John J.
ProcessVII 28	Debt of world to pure scienceVII 24
Converting byVI 174	Stewart, Ethelbert
Carnegie output ofVI 152	Labor unions influence on immi-
Works, scope ofVI 151	grantsVIII 226
Center of world of steel (W.	Wrecked labor organizationsVIII 22
Fawcett)VI 166	Stewart, Merch B
Chromite, uses ofVI 178	Army as social factorIX 153
Cobalt, hardened byVI 178	Stickney, A. B.
Edgar Thompson Co. foundedIV 149	Railroad problemIV 298
Exports of AmericanIV 52	Stille, Henry
Handling ore at PittsburgVI 166-7	Researches ofVII 420
Hardening, metals forVI 177	Stimson, F. J.
Hauling molten ironVI 171	Labor lawsVIII 194
Horsepower of, millsVII 214	Stock, live (see live stock)
75 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Stockbridge, George Herbert
Machinery of the millsVI 172	History of electricity in America.VII 109
Methods, old furnaceVI 167	Stockyards (see packing)
Molybdenum, hardened byVI 180	Stone
Nickel for hardeningVI 178	TrustIII 164
Perils to life in millsVI 169	Stones, precious
Rails, AmericanVII 30	(G. F. Kunz)VI 32

Stones, precious—Continued.	Strikes—Continued.
Government discoveries in Amer-	War, asIII 316
icaVII 45	(See also civic federation, indus-
(See also several kinds of)	trial commission, labor, indus-
Storey, Judge	trv)
Opinion of, on Washington's veto	Strong O S
of representation bill	Work of civic federationVIII 100
Storms (see weather)	Strawberries
Story, Joseph	Williams, Roger, found in Amer-
Supports navy	ica byV 238
Stowe, Harriet Beecher 361	ica by
Strikes	Struthers, J.
And the philosophy of the strik-	Asphaltum and bituminous
ers. (F. K. Foster)VIII 152	rockVI 395
Accomplish nothingIII 315	Asphaltum and bitumen
AmericanVIII 16	BauxiteVI 266
Arbitration, compulsory, labor	BoraxV1 414
opposed toVIII 166	Crude mineral productsV1 318
Of good	GranhiteVI 300
Rescom	Mineral nigmentsV1 317
Breakers, andVIII 160	Phosphate rockVI 438
Business principles, antagonistic	QuicksilverVI 289
toIII 315	Sulphur and pyriteVI 348
Colling of VIII 170	Sulphur and pyrice
Course of VIII 150	Stuart, James E
Giran makers of	The army in the Spanish war.
Coal of 1897	Sturgeon, WilliamVII 114 Electrical scientistVII 114
Of 1900	Electrical scientist
Of 1902	SulphurVI 352 Prepared, howVI 348
Of 1902III 321	Prepared, now
Of 1902 demoralization caused	
byIII 323	Uses of
Of 1002 losses in	Dupper (labora)
Of 1002 report on	TX 82
Compulsion not bargains	Durat Sarris
Congowration in	VII 259
Cost of statistics of	
G+ degisions on VIII 201	11 113
Dulings on VIII 100	
Tefforts of in figures	11 83
Tessioney of	Achievements of
Floundries in VIII 92	11 78
Torr Could	
Towlereness tend to	11 62
Timited to few men VIII 12	1 to a store of
as we want of (H W. Field), VIII 10	ol I something II 80
Motivos of	decision on rights
Object of primary	~ 1
O shong and	- toman of their
D. Ilmon	9 1 1 89
	Scott case Opinion of
Demoning for	G
~ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	the descence of on
T1-0114 11 12	1 84
of	VIII 49
Grandaria)	11 (0
Caggod should be	· · · · · · · · · · · · · · · · · · ·
m . do amione and	11 90
masson encolleage	Dedwee in for
mto groups of and lockoups,	1 Onder decision in
(F. J. Sullivan)VIII 1	48 l Gibbons vs. Ogdon, doctor
(I. O. Duni, day)	

Supreme court—Continued.	Sugar, cane—Continued.
Harlan, decision of, on railroad	Preservative, as
rates	Price of beets, average yield
Insular cases, decision of, inII 88	andV 23
International diplomacy, mem-	Statistics of beet and sugar pro-
bers of, in	duction by statesV 23
Functions (Field)	
Jefferson's appointeesII 82	Sugar, cane
Justices of II 82	(F. G. Freret)V 20
	American, house, first
	Best
Majority, proposal to fixII 86 Missouri, trans, decisionIV 223	Capital, early, in
Militia, uses of, by	In modern plant V 21
Mistakes of	Changes, post-bellum
Number of members ofII 82	Civil war, effect of
Opinions of, value of, writtenII 85	Coiron's caneV 21
Packing of	Columbus, found byV 21
President, interfered with, by ac-	Consumption, ante-bellum and
tion of, in Georgia slave casesII 84	presentV 21
Prize cases	
Safeguards of justiceII 84	Cost of handlingV 22
Stability, its (Simeon E. Baldwin) .II 81	Production
States, as arbiter betweenII 90	Crops and weather V 22
Unanimity desirableII 86	Cuban plantations
Union, on indivisibility ofII 75	de Bore's invention
Work of, earlyII 81	Diffusion process
Subsidies	Government experiments V 21
American, earlyIII 40	History, earlyV 20
Foreign merchant marineIV 126	Louisiana, introduced intoV 21
Submarine boats, (see boats, sub-	Methods, early V 21
marine)	Plantations, character of V 2
Subways (see railroads, underground)	Sucrose content of caneV 22
Sugar	Manufacture, presentmethods
American and world's production,	ofV 219
comparedIII 2	Manufacturing, present methods
Area and productionV 6	of
In CubaII 307	MolassesV 22
Molasses act of 1733, effect ofIV 83	Morgan's vacuum panV 21:
Porto RicanII 299	PlantingV 210
Tariff andIII 370-1	Production, early and later V 214
Trust, prosecution ofIII 207	Rillieux' evaporation methodV 213
In FranceII 354	Social plantation life V 216
TheII 346	Soil and cultivation V 22
West, in the earlIII 19y	Statistics, recent, of
Sugar (beet)	Steam mill, first V 212
(Charles F. Saylor)	Suicide
American, belt	Causes of, in cities
Arts and sciences, in the	(See also suicide, race)
Capital, present, in industryV 233	Suicide, race
Consumption, American and for-	Causes of
eign	Children, decline in number of X 211
Increase in U. S V 233	From 1850 to 1900
Cost of beet productionV 229	In U. S., (W. F. Wilcox)
Costs and profits in V 232	Negro and whiteX 210
Crops, first American	Reproduction by decadesX 209
Favorable localities V 230	Statistics
Food, as	Women and children, statistics
History, early	of
Industry in U. S., (C. F. Saylor)V 227	Sullivan, Frank J
Labor in beet fields V 230	Twenty years of strikes and
Plant, care of growing	lockoutsVIII 148

Sulphur	Tariff—Continued.
J. Struthers, onVI 348	Foreign policy andII 124
Consumption of sulphuric acidVI 359	Free trade act of 1846II 324
Extraction ofVI 354	George B. Curtiss, onII 318
History, earlyVI 348	Henry Clay, onII 320
Manufacture of sulphuric acidVI 358	History, early, ofII 312
Market forms ofVI 349	Increase of, in 1842II 323
Mining of, in U. S	Iron, not vitalVI 100
Occurrence of, in U. S	Its mission doneIV 267
Surgery (see medicine and surgery) Sutro, Adolph, mining engineerVI 25	Jackson onII 319
Sweat shops	Kasson treatiesII 384
Industrial commission onVIII 31	Laborers, andII 341
Open shopsVIII 212	Legislation, hostile, of 1815–18IV 92
Remnants of old regimeVIII 342	Locomotives, foreign, onIV 388
Swift, Eben	McKinley bill of 1890II 333
Training of military officersIX 141	On earlyII 320
Swine	Manufacture, lowers quality ofIII 289
American, first	Opposition to, of 1816IV 97 Panic of 1855II 327
(See also hogs)	Paper trust, andIII 368
Switzerland	Party issue, as aII 329
Races in	Pioneers of
Watch industriesVII 353	Population andII 316
Swords	Prices andVIII 269
Biddle's	Protection in U. SII 312
Decatur'sIX 397	Reciprocity commissionII 383
Historic, (R. I. Geare)IX 392	Reduction of 1833II 321
Jameson'sIX 398	Of 1857II 327
Of Dewey	Removed, when, should beII 377 Retaliation, beginning of Ameri-
Of GrantIX 398	canIV 98
Of HancockIX 400	Retaliation in iron, danger ofVI 117
Of Jesse Duncan ElliottIX 394	Republican, firstII 330
Of ShermanIX 400	Policy, asII 392
Ord's, J. T	Republicans in 1892, defeat ofII 334
Ripley'sIX 397	Revenue billII 333
Syrup (see sugar)	South opposed to earlyII 321
Dyrup (See Bugar)	Standard of, living, andVIII 263
T	Steel trust and
em 11.	Tin plate, andII 344
TailorsVIII 18	Tobacco, andV 282
Talc	Trust andIII 371
J. H. Pratt, onVI 424	Trade, early increase of, underII 317
Mining ofVI 427	Trust, argument onIII 373
OccurrenceVI 425-6	Manufactures, onIII 362
Uses ofVI 428	Trusts, the, and (S. E. Payne) II 338
Varieties ofVI 427	And the, (C. Beardsley)III 115
Taney, Roger B	And the, (C. Beardsley)II 347
Lincoln, compared withII 70	Free trade no remedy for II 357
"Dred Scott case"II 85	In Europe, andII 353
Tariff	In Great Britain andII 351
Buchanan's message of 1857II 328	No relation toII 352
Constitution, in theVII 271 II 315	Non-protectedIII 366
Cotton, and trustsIII 368	Protected byIII 363
Cuban, reducedII 308	United nations and
Dingley bill and its effectsII 336	Wages, andviii 133
Effect of, from 1865 to 1883II 331	Walker's, Robert J., bill
First act, effect of	Watch industry andII 343

Tarbell, Ida M	Telegraphs—Continued.
Declaration of independenceII 10	House committee, first report of,
Tassin, Augustus G	onIV 462
Sword ofIX 401	Invention, backwardness ofIV 483
Taussig, F. W	Line, opening of firstIV 480
American iron industryVI 105	Lines, early
Taxation	Message, first privateIV 465
Education and 86	First publicIV 467
Taylor, F. W	Messenger call IV 485
Premium wage system ofVIII 294	Morse and Vail, merits ofVII 123
Taylor, H. C., naval officerIX 369	
Taylor, William A	Partnership of
Substitution of domestic for	Poverty of
foreign fruits V 236	Morse, early poverty ofIV 480 Invention ofVII 117 IV 460
Taylor, Zachary, soldierIX 46	On construction of linesIV 476
Геа	Morse's claimsVII 121
American, (J. Wilson)V 412	Letter to WoodburyIV 462
American, gardens, (G. R.	Proposal to congressIV 465
Clarke)	Report to secretary of treasury. IV 475
Power, problems of	Operating forces in 1845IV 480
Climate and soil	Overland line, building ofIV 482
Competition for U. S. growerV 295	Philadelphia-New York lineIV 476
Cost of manufacture	Porto RicanII 298
Culture in U. S., (Grace Clarke)V 292	Postal company
Early American	Profits in 1846IV 480
Government garden in South	Progress of 1844
Carolina	Railroad lines, andIV 481
Growth and profits of, culture in	Rates and rules of first lineIV 478
U. S	Receipts, early
Production of high pricedV 296	Recent progress of, (M. W.
Profit in American black	Courtright)
Shepard, Charles, as growerV 293	Report, first, of national con-
Teachers (see trades unions)	vention byIV 476
Technical education (see education).	Stearns, Nicholson, and Phelps,
rechnology (see education, technical)	inventions ofVII 132
Tehuantepic ship canal	Tesla on wirelessVII 163
American reservationII 238	Vail as inventor ofVII 119
Ship railwayII 234	Complaints of MorseIV 473
Treaty of 1857 II 236	CryptogramIV 467
Felegraphs	DevicesVII 120
American Union company,	Early experimentsIV 464
organization of	ImprovementsIV 468
AutomaticIV 484	Later inventionsIV 468
Business of American, annualIV 479	Letters in 1843
Companies unprogressiveIV 483	Of 1846IV 477
Congress, action of, on earlyIV 462	New alphabetIV 468
First bill passed byIV 466	Western Union and American
Opposition of, toIV 465	Union, consolidation ofIV 482
Congressional help	Western Union, organization ofIV 481
Conversations by, first	Wheatstone system, operation of .IV 483
Early days of the first telegraph	Wires, improvements inIV 485
line (Stephen Vail)	(See cables)
Edison's inventionsVII 132	Telegraphs (submarine)
Experiments of 1844	(Frederic Royce)IV 487
Fire alarm	American Pacific cableIV 497
First instrument usedIV 467	American-West Indian lines,
Gale and Vail associates of	new, laid
Morse	Atlantic cablesVII 129
Gould and Russell SageIV 482	Atlantic company, firstIV 489
Henry's first invention VIII 115	Coblo and for fort

Telegraphs (submarine)—Continued.	Tenements—Continued.
Australian-Vancouver cable	House regulation (Robert W.
laidIV 496	De Forest)
Beginnings ofIV 487	Law for regulation ofX 194
Beginnings of IV 491	Laws in U. S X 196
British commission appointedIV 491	LimitationX 202
Cable of 1858, laying theIV 490	Need ofX 200
Civil war, work blocked byIV 490	Model
Chinese-Australian cable laidIV 495	Occupants in N. Y., number ofX 198
Cost of new Atlantic cable	Occupants in N. 1., number of
Submarine messages	Property rights andX 194
European, early	Rent fromX 202
Field's early work	Sanitation andX 195
Field, Cyrus W., idea ofIV 488	Size of
Money secured by	Water supply ofX 199
French-American cable laidIV 495	Tennant, John V. B., physicianVII 407
Second, cable laid	Tennessee cruiserIX 303
Gould cables laid	Iron clad, structure of IX 330
Gould cables laid	Territories N. W
Great Eastern fails	Colonization, barred from, by
Final success	MonroeII 167
PurchasedIV 493	Monroe
New trial	Terror, (monitor)IX 293
Success	Tesla, Nikola
Improvement in submarine in	Earth currents, discoversVII 165
ton years	Plans of, for wireless plantsVII 168
In methods and material	Transmission of electric energy
India cables failure of the	without wiresVII 163
Second	Wireless electricityVII 168
Irish-American cable laidIV 495	Texas
London-Cape Town cable laidIV 495	Annexation ofII 279, IX 44
Mackey-Bennett cable laidIV 496	Holst, Von, on
Mackey-Bennett Cable lake	Holst, von, on
Mediterranean capie, inst	Treaty of 1844
New York-West Indies-Brazil	Cattle breeding, dominance of, in V 182
cable laidIV 495	Development and statistics ofII 279
Nova Scotian, proposedIV 488	History, early
Routes of submarine	Mayican war
Speed of transmission, earlyIV 491	Republic declared
Statistics of	Sign of
Tolography (see telegraphs)	U. S. S
Telephone the	(See also war, Mexican)
D	Mortile febrics
hom Rell)	Difficulties, early, in AmericaVII 270
Dalla coult experiments	Horsepower in, millsVII 214
First idea	Production, American and world's
Currents, telephonicVII 173	comparedIII
TT-l-sholter idea	Trusts controlling, statistics ofIII 16
Invention ofVII 9-10 137	Trusts controlling, statistics of
Invention of	(See also special fabric names)
Inventors of VII 181	Thayer schoolVII 30
PerfectedVII 181	FD1 4
PhonographVII 372	American (Otis Skinner)
Rival claimsVII 137	\\\alpha_1 = \dagger \qq
Success, first	Pooth Edwin ,1 312, 31
Mammerance	Cuchman Charlotte
I show a requirement of Ameri-	Doly's work
can	Drowe the
(See also drunkenness)	Foreign methods, study of 30
m	Players in U. S
Clarat accommodation	Forrest, Edwin
C-+ -4 201	
D-4-ition of	
Time emotion for	1 A mloom 1 309, 31
HistoryX 197	Players, early American I 309, 31
History	,

Theaters—Continued.	Tonnage—Continued.	
Union Square 310	Suez canal'sIV 1	19
Rise of the American stage	(See also commerce, trade, great	
Thorne, C. R	lakes, shipbuilding)	
Thimmonier, Barthelemy	ToolsVIII 3	36
Inventor of sewing machineVII 341	Foreign estimate of American, IV	
	(See also machinery)	
Thomas, A. L	TopazVI 329, 3	221
American advertising 387	(See also corundum)) ()
Thomas, Leroy		
Commercial floriculture	Tornadoes (see weather, relief)	
Thomson, Elihu, electricianVII 133	Torpedo boats	
ThomsoniteVI 334	(J. D. J. Kelley)IX 3	
	DestroyersIX 3	31.
Thoreau, Henry D 359	Firing torpedoes:IX 3	
Thunder (see weather)	ImprovingIX 3	32
Thurston, Robert H	StatisticsIX 3	31
Business principles in the con-	Types ofIX 3	
duct of industriesIII 311	Whitehead toIX 3	
Tobacco	Tourmaline	
(John H. Garber)V 277	Mining ofVI 3	22
Acreage, percentage to generalV 280	Townsend, George Alfred	,0
ValueV 280	Early American financiersIII 4	4.0
		ŧU.
Cigar production and consump-	Trachoma	
tion in U. S	Immigrants afflicted withX 1	
Cigarette statistics	Table ofX 1	12
Commercial importance of,	Traction (see railroads and subheads)	
early	Trade	
Crops, first American	Agriculture, American, andIV 1	10
CubanII 307	American, and commerce, (Victor	
Cultivated first by EuropeansV 278	H. Metcalf)IV	
England, growth forbidden inIV 72	Difficulties inIV	1
Enumeration, effect of, on		8
Exports 32		
First	Ancient times, inIV 2	
Georgia, early cultivation inV 19	And railroadsIV 2	
History, early	Asia and OceaniaIV	
Integration of, industry V 286	As American fly wheelIV 1	
	AtlanticIV	2
Manufacture, extent of, and	Australia, British and American	
methodsV 281	withIV	- 1
Of chewing, and smoking,	Beginning of American manu-	
and snuff	factures andIV	9
MachineryV 283		8
Porto RicanII 299	British and South AmericaIV	
Production, American, 1900V 280	Dependence on AmericaIV 1	11.
Area andV 6	With South AmericaIV	
By states	Canal and river traffic, statistics	
Cost of	of AmericanIV 2	201
Early		20:
New EnglandV 280	Capital, first large use of for-	
Increase of	eignIV 1	10
SeedV 319	China and Japan, British and	
	American withIV	8-
SnuffV 285	China, American dependence on	
Tariff, andV 282	in cottonIV 1	11
Trust, the	Opened by Philippine conquest, II 2	20
Trusts and	Chinese, importance ofIV 2	20
Tolman, W. H	Consular service, value of IV 1	
The social engineerVIII 319		1
Tonnage	In Cuba and PhilippinesIV 13-	
Isthmian canal, increase of,	Cuba as gate to LatinIV	6
andIV 195	Debts, our foreignIV	4
Isthmian canal, possible, ofIV 193	Diplomacy, American, in Orient . II 1	16

ade—Continued.	Trade—Continued.
Eastern states, and	Shipbuilding and foreign, early
Elevators, modern grainIV 163	AmericanIV 101
Europe as a buyer in AmericaIV 42	South America, American withIV 6
European, deficiencies ofIV 22	German with
Export of manufactures for	Specie, exports and imports of,
1904IV 112	1820–30IV 106
Permanency of U. SIV 110	1820-30 IV 102
Slow growth of AmericanIV 10	Statistics of, in 1821
Exports and imports 1820-30IV 105	Steamboating, earlyIV 153
Extension of our domestic and	Subsidized ships, foreign
foreign, (G. B. Cortelyou)IV 514	Suez canal India andIV 20
Farmers, in U. S., difficulties of	Canal, tonnage ofIV 196
early	Tariff legislation, hostile, of
Food shipper, U. S. asIV 93	1815–18IV 92
	Pioneers of, and
For 1820–30, balance of	Tonnage, American, 1861–1901IV 131
I OI CIBILOI GEOCH II II III	Topography, American, andIV 25
Tranco with bodon resident	Trusts, and foreignIV 111
I'm, carry minericult	Transportation, early AmericanIV 90
Ilaibois, American.	And pioneeringIV 96
How best promoted	Wheat exports, AmericanIV 40
History, early, U. S	World, uniting the
Imports in 1820, decrease ofIV 91	(G 1- closesters industry)
In 1904	(See also elevators, industry)
Increase ofIII 478	Trade, boards of
From 1821IV 104	raimers, mituence on
Increasing complexity of	Trades Unions
Intricacies of AmericanIV 104	Alien labor in packingVIII 227
Isthmian canal andIV 182	American federation of labor,
Lakes, annual, of greatIV 148	(S. Gompers)VIII 143
Of the great	Americanizing force ofVIII 231
Locomotives, foreign, in	An influence for industrial peace,
Machinery, American, in Eu-	(J. Duncan)VIII 178
rope	Arbitration, compulsory, andVIII 121
Maintenance of	Opposed toVIII 166
Manufacturing plants, distribu-	Building tradesVIII 211
tion of, in 1820	Character of unorganized labor. VIII 106
Markets, accessibility of	Chinese andVIII 240
Merchant marine, earnings of,	Civilization, products ofVIII 155
in 1820IV 105	Closed shopsVIII 206-7
Navy, need ofIV 16	Combination, a lawVIII 113
Metals, foreign, in precious, for	Conspiracy andVIII 216
1820–30IV 107	DecisionsVIII 200-1
National policy, need ofII 113	Contracts, closed shopVIII 218
Of 1820–30, analysis ofIV 106	LabelVIII 192
Of U. S	Nature of
Orient, America's, inII 140 IV 111	Sanctity ofVIII 178
Oriental, railroad steamers forVII 205	Definition of open shopVIII 201
Pacific lands, American, with IV 15	Differentiation ofVIII 223
Plants, American, in EuropeIV 116	Effect of agreementsVIII 205
Porto RicanII 299	Evolution, andVIII 223
Porto Rican	Federation of labor, American,
Prices of 1000 products, carry	nermanence ofVIII 222
Progress, forces of	Future ofVIII 174
Railroad rates and exportsIV 225	Good inVIII 133
Railroads and growth of Ameri-	Government employesVIII 208
can	
Reciprocity, navigation, of 18181v 96	Early in II SVIII 199
Retaliation, beginning of Ameri-	O TT CI VIII 175
can	How labor, benefits the working-
Rivers of American	(F F Ingram) VIII 172
Importance of AmericanIV 30	1110111, (2

rades Unions—Continued.	Trades Unions—Continued.
Imported labor andVIII 199	Wrecked, (E. Stewart)VIII 22
Importing foreignersVIII 237	(See also civic federation, indus-
Incompleteness ofVIII 220	trial commission
IndestructibleVIII 222	Training, manual
Inevitable and justVIII 307	Reformatories andX 26
Label, (J. G. Brooks)VIII 181	Transportation
AdoptedVIII 182	Agriculture, influence on
EarliestVIII 181	
(F. J. Stimson)VIII 194	
GarmentVIII 183	
Hatters'VIII 183 186	Pioneering andIV 9
Influence ofVIII 184	
Law, IllinoisVIII 195	
Purpose of theVIII 181	
Strengthening theVIII 187	
Uses ofVIII 191	
	Corporations, stock of earlyIII 3
Law and closed shop contract,	
(Walter Drew)VIII 215	
Locomotive engineers organized.VIII 144	
Machinery andVIII 368	
Methods, rightVIII 97	
Mine workers'VIII 352	
PerfectingVIII 349	
UnitedVIII 349	
Miners, organization ofVIII 348	
Monopolies, andVIII 131	(See also automobiles)
Monopoly, aVIII 133	(See also railroads, trade, com-
Open shop agreementsVIII 203	merce, great lakes, canals)
PolicyVIII 199	Travis, Ira D
Open shop policy, (John R.	Isthmian canalII 22
Commons)VIII 199	
Organization, thoroughVIII 207	
Personal factorsVIII 211	
Political nature ofVIII 208	
Power ofVIII 178	
Problems ofVIII 139	
Race competition andVIII 255	
Brotherhood ofVIII 258	
Railroads andVIII 209	
Recognized, notVIII 97	
Rights ofVIII 216	
Shoemakers', survival ofVIII 222	
Social influence of	
Socialism, opposed toVIII 129	
Unorganized labor andVIII 135	
Solidarity of, cure forVIII 429	
Strike breakersVIII 160	
Strikes andVIII 156	
Sweat shopsVIII 212	
Tainted money andVIII 132	CriticizedII 38
Tariff, andVIII 199	
Teachers'VIII 385	
	1 Oregon ceded II 98
Trusts, caused byVIII 112	
Typesetters', women inVIII 384	President, powers of II 20
Un-AmericanVIII 257	Reciprocity, various
UnprotectedVIII 200	River navigation, free, in con-
Woman's place inVIII 378	gress of ViennaII 16
Women inVIII 383	
Garment workers'VIII 38	
	The state of the s

1	
Treaties—Continued.	Trust companies—Continued.
Senate a check onII 208	Competition
Spanish claims commissionII 222	Among AmericanII 357
Treves, Baron, surgeonVII 435	An impossible remedyIII 141
Frichina	Crushing, remedy forIII 135
Trichina	Disappearance ofVIII 128
In manVII 419-20	Evils of, exaggeratedIII 137
Frinidad	Not caused by III 127-8
Asphaltum, deposits of VI 399	PotentialIII 139
Frinity college, Hartford	Troubled byIII 125
Architecture of	Whisky, not due toIII 127
Tripler (see liquid air)	Whisky, not due to
Tripler (see iiquid aii)	With, a wasteIII 140
TripoliVI 436	UntriedIII 138
Tropics	Congress
American production in IV 44	And anti-trust lawIII 211
(See races)	Constitutional power ofIII 207
Trowbridge, William F	How, may control, (J. W.
Shoe manufacturerVII 323	Jenks)III 222
Trusts	Resources of, for control ofIII 218
(J. W. Folk)	Right of to control, (P. C.
(Deter S. Grossenn) III 77	Knox)III 204
(Peter S. Grosscup)	Constitution, inadequacy of the,
(Arthur T. Hadley)III 111	to deal withIII 61
Halle, von, onIII 124	Consolidation, benefits ofIII 92
John A. Hobson, on	Causes of
Willoughby, W. F. on	Causes of the land have fow men III 55
Trust companies	Controlled by a few men
Admiration for, American	
Alarm over, American	Cotton freights, equalizingIII 215
And prices, (I. A. Hourwich)III 145	Contracts, legality of
Progress, (W. R. Lawson)III 377	Created by tariffIII 370
Anti-trust law, inefficiency of III 208	Danger lurking in
Limitation ofIII 207	Dangerous to stateIII 169
Arguments, general, againstIII 160	Nepotism, dangers of
ForIII 159	Prophecy, (Senator C. K.
For of in	Davis)
Banking, concentration of, in	Definition of
U. S., (C. J. Bullock)III 411	Democratic, system ofIII 55
Banks and III 434, 448	Department storesIII 72
Bargains, do not dictateIII 128	Development, stages of
Burglary andIII 435	Developers of abilityIII 131
Buy cheaplyIII 145	
Capital in	
Invested	Discrimination, desirable.
Statistics of	
Capitalization of	
Carnegie company's powerIII 69	
Causes of growth of	Economies of
Causes ofIII 105	In advertising and solicitingIII 129
Cement and clay	Feonomists American, and111 98
Census, plan of taking, of III 161	Economy of, and invention
Census, plan of taking, of	Fly's view
Cheap labor and	Employees, statistics of
Chemical, statistics ofIII 164	Engineers helped by
China andIII 101	Enterprise dampeners of
Civilization, combination a trait	T 1 maniquous of III 200
of	
Clay, glass, and stone, statistics 111 164	Factor system, growth of
Coal strike of 1902, popular	Tacody system, 5
feeling and	
And railroads	
Combination a lawVIII III	3 III 227
And competition	111 229
Meaning ofIII 12	Law, a goodIII 229
Intoming or the transfer of th	

Prust companies — Federal incor-	Trust companies—Continued.
poration of, Continued	Machinery, aided by
Objections toIII 228	Manufacturing, legalIII 208
Financial change caused byIII 81	Meat monopolyIV 336
Financier, the, andIII 55	Trust prosecutionIII 215
Fixed charges unaffectedIII 130-1	Menace to AmericaIII 50
Flour monopolyIV 336	Metal, statistics ofIII 164
Food products, statistics ofIII 163	Miscellaneous, classed asIII 164
Foreign eyes, good inVIII 12	Monopoly
Trade, and	And classes, (J. B. Clark)VIII 12
France, prohibited inII 354	Cannot establishIII 134
Free trade no remedyII 357	IntolerableVIII 129
Future, effects of	Losses ofIII 13:
Of, cloudyIII 124	No advantageIII 130
QuestionedIII 104	Not the objectIII 12:
Germany in	PowerIII 11
Good and bad of, (C. J. Bullock). III 121	PredictedIII 12
Good inIII 83 IV 267 Government control ofIV 341	Private in U. SIII 53
	SafeIII 139-4
Interference, successful,III 217 Ownership, impossible underIV 364	Morgan, J. P., entrance of, in steel-III 6
Grain monopoly, the	Nation helpless III 210 Natural growth III 111
Great Britain, in	Nature of
Grosscup's definition ofIII 79	Necessaries of life andIII 200
Remedy for III 89	Non-protectedIII 360
Growth ofIII 434	Northern securities prosecutionIII 210
History of, in U. S., earlyII 346	Number of, in U. S
Illinois, largestIII 438	OilII 34
In America, number of III 162	Price of, in eighteen citiesIII 15
Incapable hands, inIII 98	Oils
Incorporation of, firstIII 434	Overcapitalization, evil ofIII 20
Increase ofIII 439	Owners must be moralIII 14
Independent concerns, rise ofIII 143	Of, benefactorsIII 8
Individual advancement, would	Ownership
curtailIII 132	Curtail popularIII 8
IndustryIII 431	New system ofIII 7
· Industrial commission, andIII 105	Public, only remedyIII 14:
Report ofIII 106	Paper, statistics of
Competition, destructiveIII 108	Plants controlled, number ofIII 16
Discriminations, unjustIII 108	Popularly owned, will be
Forms taken by III 112	Prevalence of, ultimateIII 13.
Growth, rapidity ofIII 106	Progress andIII 42
Public controlIII 118	Policy, public, againstIII 5
Tariff andIII 115 In light of census, (W. R. Mer-	Price table, Monnett'sIII 15
riam)III 159	Prices, high naturalIII 13' Discrimination inIII 22-
In U. S	Fluctuations in oil
Investigating the, problem,	Increase
(M. H. Robinson)III 102	Market unaffected by arbitrary III 15
Paid by steelIII 163	Mystery in oil
Wages, influence on III 118	Of crude oilIII 14
Interstate commerce, andIII 206	Of four staples andIII 15
Investigation of, (M. H. Robin-	Oil, below costIII 14
sonIII 102	Oil, for twenty yearsIII 14
Knox, onIII 222	Oil, local discrimination inIII 15
Law, and commonIII 218	Oil, per barrelIII 14
How trusts dodge inter-stateIII 225	Raised byIII 15.
Laws, need ofIII 217	Speculation and oilIII 15
Leather, statistics of	Pride for AmericaIII 20
Licensed, should beIII 223	Product of, valueIII 16
Lumber, statistics ofIII 164	Production, cause cheaperIII 12

Tri

st companies—Continued.	Tariff, the (S. E. Payne)II 338		
Production	As aid to, (C. Beardsley)III 361		
Economy of	As aid to, (C. Beardsley)		
Total, ofIII 104	Investments ruled by III 137		
Products of present timesIII 80	No relation to		
Profits, oil, reducedIII 147	Protected		
Property, statistics of	Removal of as remedy for		
Protection on trust goods	Tax as a remedyIII 226		
Public supervision	Tendency to not universalIII		
Publicity desirable	Toytile trusts statistics of		
Needed	Theories various		
Railroad capitalization	Trade restraint good		
Concentration	Unions and		
Regulation, (R. M. La Follette) IV 294	Trades unions, caused by VIII 121		
Regulation, (R. M. Da Policetto) III 53	II G not original in 11 303		
	Vehicle statistics of		
Capital in	Wagge and		
Caused by	Wages paid statistics of		
Rebate injunction of 1904 III 212	Wealth, center, in few hands		
Recently organized	(See also banks, steel corpora-		
Revolution, an industrial, be-	tion, United States)		
Cause of	Tubosculosis		
Rights of capital, superintend-	Combatting		
ence and labor	Immigration and		
Rise and business of the Modern	Jews, amongX 68		
Trust Company (W. P. Gest) . 111 420	Tucker W. J.		
Roosevelt, on	Concenguinity of labor and edu-		
A choole on	cationVIII 426		
First message on	The most on		
Possbory Lord on American	Steel, for hardeningVI 180		
Sherman act	Tunnels (see railroads, underground)		
Foilure of	Thombino onginos		
Law efficiency of	(C C Fitzmorris)VII 201		
Organized since	A description of		
C-si-liam of one with	Compressed air and		
Only our	Deficiencies of		
Cociolist arguments accepted	Emparimental stage		
Change of the control of	Triotomy corly		
Ctandard oil	Invention of		
Policy	NTI a mama		
State action ineffectual	Galar motive nower andVII 259		
Otaton question for the	Structure of		
The several and	Widel and Wave VII 258		
Gtool consolidation, history 01	VII 254		
Output value of			
Ctool	American duty in Armenian		
Steel (C.S. Gleed)	moggogree		
Fenencian of	VI 336		
Enture of			
Statistics of iron and			
Total salary of	Eminence of American armyIX 160		
Trust, last phase of	m to Moule		
Stock jobbing, a result ofIII 133	Con Clamana Samilel U.L.		
Stock, value of fifty trusts III 16	/ m Trilliam		
Stock, value of fifty trades of III 16	Twitchell, Ames, surgeonVII 431		
Stocks and bonds, statistics of III 16.			
	R 1 Machinery and		
SugarII 34	1 Women in, unionsVIII 384		
And tariff	Y OHIEH III, ULLIOZZIVI		
Decision, Supreme court111 20	o Typewriters		
Procecution of	Doddie Patter F Porhour VII 365		
Tainted money andVIII 13	2 Development of, (H. E. Barboar, 112		
A WILLIAM TANADA			

Typewriters—Continued.	United States—Continued.		
Francis' patentsVII 366	Philippine islands, duty of, toII		
History, earlyVII 365	Powers, growth of president'sII	221	
Inventors of, AmericanVII 366	LASTOLY, COLLY, C.		
Uses ofVII 368 tinents			
Work ofVII 370 Producer, leads world as aIV			
ypewriting machines			
American, in EuropeIV 57	Rainfall ofIV	26	
Tides	Representation, and constitu-		
Motive power, asVII 258	tion ofII	49	
Tilton, James, physicianVII 407	First to accept fullII	36	
Tin plate	Representatives, shaken by ap-		
American wealth, andVII 274	portionment ofII	41	
	Resources, natural, ofIV	18	
Tariff andII 246 (See also iron)	Rivers ofIV	28	
TitaniumVI 180	Steel corporation (see steel cor-		
110411141111	poration, United States)		
• •	Supremacy of, in production		
U	and communicationIV	37	
77	Topography ofIV	24	
Unemployed, the, (see relief, poor)	Town sites ofIV	29	
Union, American		208	
Wilson, Justice, opinion of, onII 64	Wilson, Justice, opinion of, on		
Union, the	unionII	64	
Supreme court on	World power, evolution into aII	127	
Union Pacific railroad	Universities		
Military lineIII 371	American, (E. H. Warfield)I	186	
Unions, labor (see trades unions)	Foundations, earlyI		
United nations	Ideals, (E. G. Hirsch)I		
Authorities of	Traditions, influence ofI		
Bill of rights	Caste, breeders ofI	240	
Modeled after U. S	Development of buildingsI		
United States	Elective systems ofI		
Agreements of, other than	EnvironmentI	228	
treaties, (C. C. Hyde)II 216	Expansion of Harvard and YaleI		
Allianass familias assists IV 31	Princeton, Pennsylvania and		
Alliances, foreign, possibleII 141	ColumbiaI	190	
Asiatic empire, an	ExtensionI	195	
As a world power, (Simeon E.	Needs of	205	
Baldwin)II 196	Foreign influence, freedom of,		
Birth as a nation	fromI	200	
Climate of, causes of	Free education andI	189	
Constitution, as planned byII 78	Future of, in U. SI	200	
Held indivisible by	German influence onI	188	
Cuba and	Growth ofI		
Expansion, territorial, of, (O. P.	Home, influence onI		
Austin)II 265	Idea, theI		
Foreign relations, growth ofII 198	Industry, andIII		
French proposed alliance in	Migration of studentsI		
1793II 159	Museums, deficient inI		
Great Britain's foreign policy,	Originality of AmericanI		
andII 137	Popularizing knowledge byI		
Hague, commission to II 209	Practical needs, fillI		
Isolation of, before Spanish warIl 124	Professional schools and I 176, 189,		
Mountains of	Relations of, generalI		
Obstacles of, to world unionII 30	Research eencouragedI		
Organization of, under consti-	In AmericanI	202	
	Roman Catholic, (J. F. Mul-		
tution	laney)I		
Peace, drawbacks to, in govern-	Scholarship, American, andI		
ment of II 201	Scientific development ofI	191	

Universities—Continued.	Vehicles
Social aspirations and I 188	Statistics of, trustsIII 164
Question and I 206	Venetian redVI 321
Specialization in teaching	Venezuela
State, anti-Christian 179	Blockade, proposed, of, for debtII 189
State, vs. small college 178	Boundary disputeII 182
Types, early, in U. SI 180	Lawyers in, disputeII 105
Various AmericanI 197	VermilionVI 292
Training for business men,	Vesuvius, U. S. S
(S. N. Patten)	Veto, limitation of
Virginia, of, curriculum ofVII 298	Vicksburg
Weakness of American I 196	Battle ofIX 54-5
Working classes, not sought	CruiserIX 301
by 1 245	(See also war, the Civil)
(See also architecture, colleges,	Virginia
education)	Colonies, declaration of freedom
University extension (see universities)	of
University of California	CruiserIX 302
Architecture of	Lawyers forbidden fees inII 95
University, the Catholic	Settlement of westernIII 12
(See the Catholic university)	University of (see University of
University of ChicagoVII 81	Virginia)
	Vizcaya, the
Extension and	VoltaVII 26
University of Michigan	Von (for all names beginning with
University of New York	von see the patronymics)
Architecture of	Vosberg-Rekow, Dr
University of Pennsylvania	Manufactures, AmericanIV 58
Medicine andVII 407	Manuactures, innerteum
Tinton Emony	\mathbf{W}
American military policyIX 116	* *
Uranium VI 181	Wages
UraniumVI 181	American, highestVIII 267
Uranium VI 181 Utah. II 285	American, highestVIII 267 Workmen'sVIII 11
Uranium	American, highestVIII 267 Workmen'sVIII 11 Bank deposits ofIII 96
Utah	American, highest VIII 267 Workmen's VIII 11 Bank deposits of III 96 Basis of VIII 277
Utah	American, highestVIII 267 Workmen'sVIII 11 Bank deposits ofIII 96 Basis ofVIII 277 Cause of high, in U. S., (A. M.
Uranium. VI 181 Utah. II 285 Territory formed. VI 337 Utahite. VI 337 Utopia. II 95	American, highestVIII 267 Workmen'sVIII 11 Bank deposits ofIII 96 Basis ofVIII 277 Cause of high, in U. S., (A. M. Low)VIII 262
Utah	American, highest
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail Alfred	American, highest
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119	American, highest
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. Inventor of telegraph VII 119 Morits of VII 123	American, highest
Uranium	American, highest
Uranium	American, highest
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 120 (See also telegraphs). Vii 154	American, highest
Uranium	American, highest
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). Vii 120 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics)	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of III 96 Basis of. VIII 277 Cause of high, in U. S., (A. M. Low). VIII 262 Cheap labor not best. VIII 265 Competition and. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and. III 96 Contract system. VIII 283 Basis of. VIII 283 Objections to. VIII 284 Co-operation. VIII 304 Co-operative concerns. VIII 311 System. VIII 284 Cost of living and. VIII 261 Deficiencies of, system. VIII 301 Dolge's scheme. VIII 291
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). VII 120 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics)	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of III 96 Basis of VIII 277 Cause of high, in U. S., (A. M. Low). VIII 262 Cheap labor not best. VIII 265 Competition and VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and III 96 Contract system. VIII 283 Basis of VIII 284 Objections to VIII 286 Co-operation. VIII 308 Co-operative concerns. VIII 311 System. VIII 281 Cost of living and VIII 261 Deficiencies of, system. VIII 261 Deficiencies of, system. VIII 291 Education needed. VIII 281
Uranium	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of. III 96 Basis of. VIII 277 Cause of high, in U. S., (A. M. Low). VIII 269-70 Competition and VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and III 96 Contract system. VIII 280 Objections to. VIII 283 Objections to. VIII 283 Co-operative concerns. VIII 303 Co-operative concerns. VIII 304 Cost of living and VIII 260 Deficiencies of, system. VIII 305 Dolge's scheme. VIII 295 Education needed. VIII 295 Employees, amenities to. VIII 296-70
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). IV 406 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VI 181 Vandergrift and Foreman (see Standard oil).	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of. III 96 Basis of. VIII 277 Cause of high, in U. S., (A. M. Low). VIII 269-70 Competition and VIII 269-70 Conditions of service. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and III 96 Contract system. VIII 283 Basis of. VIII 283 Objections to. VIII 283 Co-operation. VIII 303 Co-operative concerns. VIII 313 System. VIII 284 Cost of living and VIII 260 Deficiencies of, system. VIII 301 Deficiencies of, system. VIII 302 Education needed. VIII 296 Employees, amenities to. VIII 296 Employees' responsibilities. VIII 296 Employers' responsibilities. VIII 296
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 19 Merits of VII 123 Various devices of VII 123 Various devices of VII 120 (See also telegraphs). VII 120 (See also telegraphs). IV 406 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VII 181 Vandergrift and Foreman (see Standard oil).	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of III 96 Basis of. VIII 277 Cause of high, in U. S., (A. M. Low). VIII 262 Cheap labor not best. VIII 265 Competition and. VIII 269-70 Conditions of service. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and. III 96 Contract system. VIII 282 Basis of. VIII 283 Go-operation. VIII 303 Co-operation. VIII 304 Co-operative concerns. VIII 311 System. VIII 283 Cost of living and. VIII 284 Deficiencies of, system. VIII 301 Dolge's scheme. VIII 295 Education needed. VIII 295 Employees, amenities to. VIII 296 Employers' responsibilities. VIII 296
Uranium. VI 161 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 119 Merits of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). IV 406 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VI 181 Vanderrift and Foreman (see Standard oil). Vanderlip, Frank A	American, highest
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). IV 406 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VI 181 Vandergrift and Foreman (see Standard oil). Vanderlip, Frank A. The industrial and financial future of U.S. III 475	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of. III 96 Basis of. VIII 277 Cause of high, in U. S., (A. M. Low). VIII 269-70 Competition and VIII 269-70 Conditions of service. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and. III 96 Contract system. VIII 283 Basis of. VIII 283 Objections to. VIII 283 Co-operation. VIII 303 Co-operative concerns. VIII 304 Cost of living and. VIII 261 Deficiencies of, system. VIII 305 Dolge's scheme. VIII 205 Education needed. VIII 284 Employees, amenities to. VIII 296- Employers' responsibilities. VIII 296- Employers' responsibilities. VIII 296- Empopean and American. III 9 Comparative, of American. IIII Evolution and. VIII 31
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). IV 406 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VI 181 Vandergrift and Foreman (see Standard oil). Vanderlip, Frank A. The industrial and financial future of U.S. III 475	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of III 96 Basis of VIII 277 Cause of high, in U. S., (A. M. Low). VIII 269-70 Congetition and VIII 269-70 Conditions of service. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and III 96 Contract system. VIII 283 Basis of VIII 283 Co-operation. VIII 283 Co-operation. VIII 303 Co-operative concerns. VIII 313 System. VIII 284 Cost of living and VIII 269 Deficiencies of, system. VIII 303 Dolge's scheme. VIII 296 Education needed. VIII 296 Employees, amenities to. VIII 296 Employees, amenities to. VIII 296 Employers' responsibilities. VIII 296 Employers' responsibilities. VIII 296 European and American. III 9 Comparative, of American. III 5 Evolution and VIII 31 Farm labor, of VIII 31
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 199 Merits of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). VII 120 Telegraphs early, days of the first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VII 181 Vandergrift and Foreman (see Standard oil). Vanderlip, Frank A. The industrial and financial future of U.S. III 475 Varley, Cromwell. VII 175	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of III 96 Basis of VIII 277 Cause of high, in U. S., (A. M. Low). VIII 262 Cheap labor not best. VIII 269 Competition and. VIII 269-70 Conditions of service. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and. III 96 Contract system. VIII 282 Basis of. VIII 283 Co-operation. VIII 303 Co-operation. VIII 303 Co-operative concerns. VIII 313 System. VIII 283 Cost of living and. VIII 261 Deficiencies of, system. VIII 262 Deficiencies of, system. VIII 263 Deficiencies of, system. VIII 264 Employees, amenities to. VIII 296 Employers' responsibilities. VIII 296 Employers' responsibilities. VIII 296 Employers' responsibilities. VIII 296 Employers' of American. III 90 Comparative, of American. III 1 Evolution and. VIII 31 Farm labor, of. VIII 27
Uranium. VI 181 Utah. II 285 Utahite. VI 337 Utopia. II 95 V Vail, Alfred. VII 119 Merits of. VII 123 Various devices of. VII 123 Various devices of. VII 120 (See also telegraphs). VII 120 (See also telegraphs). IV 406 Telegraph line, first. IV 406 Telegraphs, early, days of the first. IV 460 Van (for all Dutch names beginning with Van see the patronymics) Vanadium. VI 181 Vandergrift and Foreman (see Standard oil). Vanderlip, Frank A. The industrial and financial future of U.S. III 475	American, highest. VIII 267 Workmen's. VIII 11 Bank deposits of VIII 21 Bank deposits of VIII 27 Cause of high, in U. S., (A. M. Low). VIII 265 Competition and VIII 269-70 Conditions of service. VIII 269-70 Conditions of service. VIII 280 Consolidation of, capital, and III 96 Contract system. VIII 283 Basis of. VIII 283 Objections to VIII 283 Co-operation. VIII 283 Co-operative concerns. VIII 303 Co-operative concerns. VIII 313 System. VIII 284 Cost of living and VIII 265 Deficiencies of, system. VIII 205 Education needed. VIII 296 Education needed. VIII 296 Employees, amenities to VIII 296 Employers' responsibilities. VIII 296 Employers' responsibilities. VIII 296 European and American III 9 Comparative, of American III 9 Comparative, of American III 5 Evolution and VIII 311 Farm labor, of V 10

Wages—Continued.	Wallace, John Findley
Increase of, and inventionVII 274	Panama canal, engineering prob-
Industrial commission onVIII 30	lems of 170
Individuality of workmenVIII 328	Walnuts
Living standard in U. SVIII 264	Burbank'sVII 107
Low, and world's marketsVIII 416	Production
Machinery andVIII 270	Walsh, William S
Menace to premium systemVIII 299	American literature 349
New Zealand solutionVIII 290	Waltham
Open shops andVIII 211	Watch industryVII 352
Organization, dependent on in-	War, the Civil
dustrialIII 95	Agreements, power of officers to
Piece workVIII 283, 293	makeII 224
Power, motive, andVII 233	Army in, (C. A. Partridge) IX 51
Premium system of, (A. E.	Achievements of
Outerbridge)VIII 291	At end ofIX 56
Premiums suggestedVIII 293	State of, at beginning ofIX 52
Prices andVIII 269	
Problems ofVIII 302	
Production, cost high, andVIII 300	
Machinery andVIII 268	Compared with other warsIX 62
	Conditions on both sidesIX 54
Product sharingVIII 306	Cotton, andV 108
Profit sharing and co-operation,	Glory not a factor in American
(N. P. Gilman)VIII 302	warsIX 122
Profit sharingVIII 292	Grant made general
Protection andVIII 263	CampaignsIX 55
RailroadIV 327	Industry, its effects onIII 371
Railroads in China and Japan,	Length of AmericanIX 117
andVIII 412	Merrimac and MonitorIX 259
Responsibility of laborVIII 281	Military policy of U. S IX 118
Rights of workmenVIII 281	Navy inIX 188
Self-interest andVIII 304	Old American sea fights, (H. H.
Shirking andVIII 291	Boyesen)IX 265
Skilled labor, (J. Richards)VIII 275	Resources of U. SIX 126
AndVIII 266	Rewarding military heroesIX 119
Statistics, earlyVIII 276	Sherman's march
Systems, three ofVIII 316	Swords, historic, (R. I. Geare)IX 393
VariousVIII 308	Vicksburg, battle ofIX 5
Taylor premium systemVIII 294	Virginia invadedIX 5:
Time work systemVIII 280	Weakness, cause of AmericanIX 12
Transportation, cost of, andVIII 409	West Indies, strategic value
And statistics of	ofIX 40
Unionism justVIII 307	(See also army, the, West Point,
Workmen and, character of	guard, national)
AmericanIII 252	War (of 1812)
Waldron, George B	Accounts of, variousIX 22
Railroad operation, statistics	British invasion
ofIV 228	Naval strengthIX 21
Walker, Francis A	Canada, reinvasion ofIX 3
Race suicide X 214	Canadian campaignIX 3
Technical educationVII 314	Causes leading toIX 2
Walker, Guy Morrison	Chesapeake-Shannon actionIX 23
American labor's debt to rail-	Complexities ofIX 2
roadsVIII 408	Constitution and the Guerriere,
Walker, Robert J	sea fight of theIX 224-
Tariff bill ofII 325	Constitution-Java fightIX 224-
Wall street (see finance, speculation,	Detroit, defeat atIX 3:
trusts, money, industry, capi-	English and American naval
tal, railroads)	methodsIX 22
Wallace, D. D	Equipment of shipsIX 22
Southern agricultureV 373	Eustis, Wm., andIX 28
NOUVILLE ASSIGNMENT D	Pusus, WIII., aliu

Var (of 1812)—Continued.	War, the Spanish—Continued.	
Finances ofIX 28	First plans inIX	69
Gunboat system abolishedIX 215	Foreign policy, effect of, on Amer-	
Hornet-Peacock actionIX 235	ican	214
Jefferson's policy of embargoIX 213	Hobson's featIX	249
Lundy's LaneIX 33	Lessons ofIX	90
Napoleon and IX 30	Manila bay attackIX	242
National guard inIX 138	Men in, character ofIX	248
Naval campaign ofIX 212	Monitors not effectualIX	248
Cruise of, firstIX 222	Monroe doctrineII	124
In 1809IX 215	Naval cadets, valorIX	250
IN 1809 IX 188, 266	Preparations forIX	240
Navy in	Problems of	242
State of, inIX 212	Navy inIX	239
VICTORIES OI		79
New Origans, David Oi		71
	Protocol inII	224
Results ofIX 37-8	Rapid-fire guns inIX	240
Sea fights, firstIX 223	Results ofIX	72
Strength of navy		70
Tripoli, engagement atIX 214	ofIX	242
United States-Macedonian sea		69
fightIX 231		246
1). S. not proparou for		247
Washington, fall ofIX 34	The Army since, (C. E. Hamp-	
Wasp-Frolic actionIX 229		89
War Mexican	TY	249
Alamo, fall of	TY	368
American soldiers in		000
Buena Vista, battle of	and a second of the second of	350
Buffalo bayou, battle of 44	Ward, Nathaniel, authorVII	97
Causes leading to	Ward, Lester F., sociologistVII	427
Cerro Gordo, battle of	Ware, John, physicianVII	120
Coleto river, battle of	Warfield, E. D	1.86
Conception, battle of	American universities	17
Contreras and Cherubusco	Warren, James	430
takenIX b	Warren, John Collins, surgeonVII	31.5
Declaration of	Warren, William	, ore
Gonzales, battle of	Washburne, Walter A	298
Losses, AmericanIX 5	Hotels in U. S	. 200
Mexico, city of, falls	Washington, Booker T	f 40°
Monterey, battle of	7 Future of the negroVIII	1 40.
National guard inIA 13	8 Washington, George	I 5
Provisional government	Faith of, in federal powersI	T 11
Race trouble and 4	Foreign alliances	, 17
Rio Grande campaign 4	6 General, a second timeIX	T 94
San Feline, convention of 4	1 Moral character of	I 15
Scott's invasion of MexicoIX 4	9 PeaceI	1 10
March to Mexico cityIX 4	9 Presides at Constitutional con-	т 6
Territory won by	ventionI	1 0
Texas, independence ofIX 4	Storey's opinion on apportion-	T 8
RecognizedIX 4	ment bill, veto ofI	I 5
The army in, (Charles M. Har-	Text of veto of opportionment	T #
vey)IX	69 bill	I 5
Vera Cruz investedIX	Veto of, in second apportion-	т .
War, the Spanish	ment	I 4
Mar, the Spanish	Washington, city of	
Army, the, in, (J. E. Stuart)IX	Rest governed city on con-	T 11
State of, beforeIX	tinent	.1 11
Causes ofIX	Washington, state	V 01
Cuba, first soldiers inIX	68 Cruiser	A. 30
Cuba, first soldiers in	,	

Washington, state—Continued.	Webster, Daniel			
Industries ofIII 366	Capital in U. S., estimate of			
Railroads, helped by IV 212	foreignIII 3			
Territory formedII 286	Dartmouth college caseII 10			
Washington and Lee universityVII 303	EducationI 86, 9			
Watches	Hamilton, AIII 403			
(W. A. Countryman)VII 351	Weights and measures			
Cheap watchesVII 360	U. S., in			
Cheapness of AmericanVII 352	Wells, HoraceVII 4:			
Dennison's, A. L., workVII 354	Wells, H., dentistVII 42			
History, earlyVII 350	Laughing gas, appliedVII 418			
Imports and exportsVII 362	West, the			
Improvement in manufacture	Agricultural resources of VI 22			
ofVII 356	California, industries of III 360			
Logan hair springsVII 358	Capital in, early demand forIII 23			
Machine made, superiority of VII 352	Early EasternIII 28			
Making a watchVII 358	Commerce and industries of,			
Nashua industryVII 356	(L. M. Shaw)III 363			
Plant in U. S., firstVII 353	Commercial, earlyIII 10			
Progress of invention inVII 356	Definition ofIII 363			
Revolution in, making, (W. A.	Farm areas inIII 36			
Countryman)VII 351	Food products ofIII 368			
Swiss, origin ofVII 351	Future ofIII 368			
TariffII 343	Gold resources ofVI 218			
Water	Industrial growth of earlyIII 19			
Power, as	Industries of Colorado and			
Tenement houses andX 199	MontanaIII 36			
(See also power, motive)	Of Michigan, Wisconsin, and			
Water power	MinnesotaIII 36			
In fallsIII 348	Of Washington stateIII 360			
New EnglandIII 349	Irrigation of			
Waters, Theodore	Manufactures ofIII 367			
Weather bureau, work ofVII 390	Opening of, firstIII 1			
Watkins, J. L., future demand for	General effect ofIII 23			
cotton	Packing inIII 360			
Watson, John, surgeonVII 432	Population, increase ofIII 36			
Waves	Railroad for, idealVI 223			
Motor power, asVII 258	Reclamation of, (F. H. Newell)V 34			
	Washington state, industries ofIII 360			
Way, Nicholas, physicianVII 407	(See also commerce, industry,			
Wayne, Anthony, soldier	trade)			
Wealth	West Indies			
American, (W. C. Dodge)VII 269	Cotton growing, early V 140			
Cotton gin, effect ofVII 272	Indigenous toV 107			
Gain in American, annualVII 272	Early naval war, inIX 408			
Weapons (see guns)	Strategic value of			
Weather bureau	Strategic value of, Mahan, A. T.,			
(T. Waters)	onIX 400			
ChartsVII 396	Tropic agriculture andVII 4			
ForecastingVII 393	West Point			
Lightning, statistics ofVII 399	(C. W. Larned)IX 16			
Recording the weatherVII 391	Aims ofIX 17			
StormsVII 397	Barbarism ofIX 18			
	Candidates for IX 178			
AvoidingVII 400	Centennial ofIX 17			
Tornado statisticsVII 397	Character, maker ofIX 17			
Work of, (Theodore Waters)VII 390	Of the West PointerIX 16			
Weavers	Civil warIX 17			
Conditions ofVIII 18	Curriculum ofIX 18			
Webb, William H., shipbuilderIX 327	Graduates, fate ofIX 17			
Webster, Ambrose, inventorVII 356	In warIX 17			

est Point—Graduates, Continued.	Wheeler, Cyrenus
Occupations of	Cutter ofV 96
Occupations of	Reaper ofV 86
Money spent onIX 172	Wheeling, cruiserIX 301
Raison d'etre of military schools. IX 167	Wheeling, cruiser
Scientific center, as earlyVII 57	Whetstones (see abrasive materials).
Gnonish war	Whipple, AbrahamIX 264
Technical education atVII 287, 299	Naval officerIX 207
Technical education at	Whipple, WilliamII 17
(See also military academy, war,	Whisky
army, guard, national)	AdulteratedX 298
Vest Virginia	Additionation
Admitted	White, Henry
BattleshipIX 302	Machinery and laborVIII 365
Vestern, Lucille	WhitecapsX 135
vestern, Lucine	WhitingVI 323
Vestinghouse, George	Whitman, Walt I 357, 361
Brake, invented	Whitney, Eli
Turbine enginesV11 254	Whitney, Ell V 109
(Soo also railway Cars)	Invention ofV 109
Vector Edward electrician VII 138	Whitney, William C
Wadsworth, John, physicianVII 403	Naval secretaryIX 293
Wadsworth, John, physician.	Whittier, John G I 363
Wheat	Whittelsey, Sarah S
	Factory legislation and inspec-
Area and production V 5	tion in U.S. VIII 70
Post grown in U.S V 14/	
Commerce, world's, influence on V 156	Wiggins, Twing B
Corners in	Medicine in AmericaVII 402
Corners In	Wilcox Walter F
Crop moving, effects of	Race suicide in U. S X 270
First AmericanV 21	Wiley, H. W
Crops relative value of V 13	Wiley, H. W
World's V 147	StarchV 166
Duluth, shipments at	The U. S. soils and their products. V 1
Elevator system, MinneapolisV 152	Wilkins, Mary E 365
Elevator system, Minimapons V 151	Willow Day Allen
ElevatorsV 151	Drama of furnace, forge and
Work of	shopIII 264
European trade in 40	Modern grain elevatorsIV 163
ExportsV 31	Modern grain elevators
Farm laborers, character ofV 150	
Grain elevators description ofIV 163	Willoughby, William Franklin
Grain elevators description of 158	Integration of industry in U. SIII 63
Leiter dealV 156	Williamson James, soldier
McCormick, industry's debt toV 149	Wilson, Supreme Justice
Machinery in growing V 150	Union, opinion on the
Requirements inV 150	Union, opinion on the
Marketing of, a scienceV 151	Wilson, Allen B
Minneapolis, receipt of, in	Sewing machine, inventor ofVII 344
Minneapolis, receipt of, in V 148	Wilson, Henry
Minnesota, priority of	Naval war college
Northwest, pioneer growers inV 148	
West forms of	W 19
Dit (W. R. Lawson)	1 an extensed freedom II 13
Preparing and plantingV 149	Debate of, on colonial freedom.
Prices, range of	Department of agricultureV 403
Prices, range of	Wilmington, gunboatIX 300
ProductionV 30	Titte and Does
Railroads, buildsV 152	Cor builder early
Russia second in productionV 147	, Car bunder, carry
Russia second in production V 154	WineV 267
Sold on farmsV 154	American, (J. H. Garber)V 267
Speculation inV 150	First V 269
ThrashingV 15	First successful V 270
The mighty river of, (Rollin E.	California, association, product of 200
The mighty fiver of, (from 2.	7 Early
Smith)	Growth of
Wheaton Henry	Growth of
Isthmian canal	2 Improvements
Wheatstone system (see telegraphs)	IndustryV 262
Wheatstone system (see telegraphs).	

Wine—California, Continued.	Woman—Continued.		
Production	Higher education and 1 407		
Of 1860	History of, early in laborVIII 375		
CatawbaV 270	Household and 413		
Industry, growth of	Ideals ofI		
ChampagneV 275	Industrial importance of VIII		
Character of	Intellect of		
European vines imported to	Knights of Labor andVIII		
CaliforniaV 273	Labor, place of, inVIII 375		
Grapes, early AmericanV 268	Organizations, place of, in,		
History, early	(Sophie Yudelson) VIII 375		
Ohio production, earlyV 271	Present status inVIII 376		
Production and value in 1860V 271	Laborer 1 414		
In 1880	Marriage and I 409		
In 1890 V 272	Material growth and 425		
In 1900	Nervousness of American 1 415		
Production, California	Originality, has no		
In U. S	Percentage of, in industryVIII 382		
Red	Politics I 417		
Stanford wineries	Professions and I 423		
Statistics, early AmericanV 269-70	Psychic I 420		
Early CaliforniaV 273	Public life for 418		
SweetV 276	Weal 1 408		
(See also grapes)	Science and I 421		
Winslow, Edward, author	Sphere of		
Winslow (gunboat)IX 300	Social system and I 416		
Winthrop, John, author	Socialism and I 406		
Wire (see iron)	Superiority of, to man I 410		
Wisconsin, battleshipIX 301	Trades, in variousVIII 381		
Witte, M. de, railroad man	Universities and I 421		
Woerd, C. V., inventorVII 356	Wage earner I 407		
Wolcott, Oliver	Wages ofVIII 378		
Colonies, part of, in freeingII 12	Weaknesses of, mental I 422		
Wolfe, Mrs. Catharine Lorillard,	(See also home, the)		
philanthropistX 221	Women		
Wolseley, Lord	American, in philanthropy, (May		
American armyIX 160	Wilkinson Mount)		
Woman, the American	Gould, HelenX 219		
(Hugo Munsterberg) 1 402	Jewish, employment forX 67		
Woman	Ladies church unionX 219		
American and German	Percentage of, in Germany I 408		
Celibacy and	Race suicide andX 208		
Changes in condition ofVIII 377	Woman's Exchange X 220		
Coeducation and	Young, Christian associationX 220		
College, and marriage I 411	Wood, James RushmoreVII 432		
Earnings ofVIII 382	Wood, Leonard		
EducatedI 409	Governor of MoroIX 83		
Education menaced by I 422	Wood, Walter AV 92		
Educational dominance of	Wood (see also lumber)		
Equal of man	Woodbury, Commissioner		
Equality of, makes inequality I 424	Microbes		
Factories, advent of, inVIII 378	Woodruff, Clinton Rogers		
Family, the, and	Municipal merit systemII 428		
Interest and I 417	Woods, Robert A		
Fascination of American	Educational philanthropyX 50		
Forwardness of AmericanI 408			
Freedom of American	Philanthropy in education I 264 Woodward, Calvin M., educatorVIII 423		
Function of	Woodward, J. J., physicianVII 420		
German and American housewifeI 13	Wool		
German efforts to elevate I 504			
Industry andVIII 384	Consumption, cotton, andV 136 Decline ofV 137		
	Double 01 137		

Wool-Continued.	Wright, Luke E IX 74
Exports	The army in the runippines
Production, American and	What U. S. has done for the
world's, comparedIII 2	PhilippinesII 289
Worden, J. L., naval officerIX 259	Wyck Van Mayor
Workmen	Subway, N. Y., turned earth for IV 457
Ages of	Wynne, Thomas, physicianVII 404
American, (Thomas I. Kidd)VIII 1	Wyoming
ShopsVIII 10	Territory formedII 275
Superiority ofVIII 2	Wythe, George
BricklayersVIII 20	Colonies, part of, in freeingII 12
British boss, stupidity ofVIII 9	W. Y
Child laborVIII 15	Y
Class apart, a	
Cotton spinnersVIII 17	Yale university
Cutlery, inVIII 15	Expansion of
English and AmericanVIII 2	Sheffield schoolVII 310
Foreign, not degenerateVIII 7	Voset
Home life and clubsVIII 30	Government experiments
How labor unions benefit the	Yellow fever
workingman, (F. F. Ingram). VIII 1/2	Relief for CubaII 304
Incentive to Americanviii 550	Yorktown
Toother workersVIII 20	Siege of
Machine shops, conditions of VIII 337	U. S. gunboat 252
Machinery and	Wadolson Sonhie
Moselev commissionviii =	Woman's place in laborVIII 375
Discrete VIII 21	Voung McClintock
Rights ofVIII 215	Detents of
Sanitation	
In shore	
Grand of	
Cnivit of in II. S	Zenger, Peter
Strikes American.	Zenger, 1 os
Tailors	Famous tipel case of
Wages of American	Zinc 371 001
Weavers	Development of, mines VI 277
(See also labor, trades-unions,	History of, in U. S VI 277
and doc)	Lead and, ore, (I. A. Hourwich) . VI 273
Wotten, Thomas, physicianVII 405	Mining and handling of 1210
Wwight Carroll D	Wloggy
Postowy as an element in Social	
lifeVIII 333	









HC 103 .L25 v.10 LaFollette, Robert Marion, 1855-1925, The making of America

	DATE DUE		

Concordia College Library Bronxville, NY 10708



